



(TRADE MARK REG. U.S. PAT. OFF.)

INSTRUCTIONS

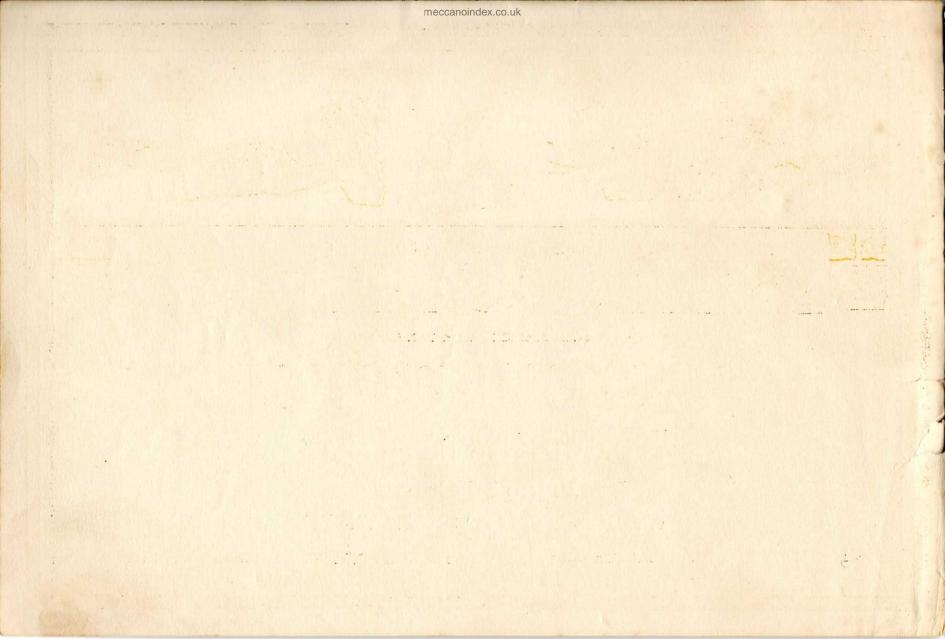
FOR OUTFITS Nos. 0 to 3

Price 35 Cents

MECCANO COMPANY

No. 56A

ELIZABETH. NEW JERSEY AMERICAN EDITION



A TALK WITH NEW MECCANO BOYS



ECCANO OUTFITS contain accurately made and highly finished engineering parts and enable every movement known to mechanism to be reproduced in model form. With Meccano you can accomplish more than with any other constructional toy, for no other system has its possibilities. No study is needed to enable anyone to build models with Meccano—the genius is in the Meccano parts.

You never come to the end of Meccano fun. There is always more ahead—always some new, ingenious and interesting model to build. Each one, as it is completed, "tuned up," and set going, brings a joy and satisfaction beyond anything that boys have ever previously experienced.

As you progress in Meccano you obtain a greater variety of parts, gear wheels, pulley wheels, worm wheels, couplings, cranks, and all manner of perfectly-made real engineering parts. These enable you to construct

complicated mechanical movements without any difficulty. The most wonderful feature of Meccano is that it is real engineering; it is fascinating and delightful and yet so simple that even an inexperienced boy may join in the fun without first having to study or learn anything.

THE LIFE OF A MECCANO BOY

A Meccano boy is the happiest boy in the world. His Outfit is his passport into a great new land of pleasure and fun—Meccanoland, where happy boys live. He has joined the great fraternity of boys who like to make things, and his fun increases with every new Meccano model that he builds. Time never hangs heavily on his hands, for with his Meccano Outfit he can make an endless variety of toys and copy any machine or structure that he cares to.

We are at all times glad to hear from Meccano boys and to correspond with them and help them with their models. Sometimes a little difficulty may be experienced in building a particular model, or some help required in designing new ones. We want all Meccano boys to get the utmost pleasure from their Outfits and we like to have them write to us and tell us what they are doing.

How to Build with Meccano

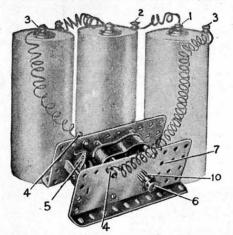
Follow the instructions closely at first, and build the models just as you see them. Then take each model and try to improve our design. Every model can be made in a dozen different ways. Screw up all the nuts and bolts firmly and you will find that you can play with the trucks, cranes, signals, etc., and obtain many hours of fun.

Meccano is sold in different sized outfits, (see page 59). All parts are of the same high quality and finish, the larger outfits containing a greater quantity and variety of parts.

Each outfit may be converted into the one next higher by the purchase of an Accessory Outfit. Thus, a No. 2 may be converted into a No. 3 by adding to it a No. 2A. A No. 3A would then convert it into a No. 4, and so on. In this way, no matter with which outfit you commence, you may by degrees build up to the largest outfit.

How to Use the Meccano Electric Motor

The Meccano Electric Motor has been specially designed for running Meccano Models and may be operated efficiently by good dry cells or a storage battery giving approximately 4 volts. If two or three dry cells are used, they should be connected together as illustrated below, the central or positive terminal (1) of the first being connected to the outside or negative terminal (2) of the next, etc. The two remaining terminals (3) should be connected to the motor terminals (4). The connecting of the second motor terminal to the battery sets the



one-way motor in motion. Insulated copper bell wire is recommended for making the connections and can be obtained at any electrical supply store.

The reversing motor has a control lever (5). When this lever is in the central position, as illustrated, the current is off and the motor is "dead." To start the motor move the lever to the right or left according to the motion desired, either forward or reverse.

A little light oil should be applied occasionally to the bearings of the motor.

The Meccano Transformer

When alternating electric current of 110 volts, 60 cycles is available it can be used to operate the motor through a Meccano transformer. (See page 58.) This transformer is well made and is very efficient; it delivers just the right voltage for Meccano Motors.

Attaching the Motor to Meccano Models

The sides and flanged base of the motor are pierced with the Meccano standardized holes, so it is a simple matter to build the motor right into the model. The illustration shows the motor attached to Model No. 122—Drop Stamp. The motor is bolted to the flanged plate and a cord is run around the motor pulley (6) and the pulley wheel (8) on the crank handle.

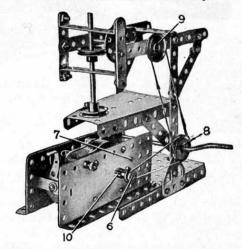
Thus the model can be operated either by hand or by motor, as desired. The crank handle and pulley (8) could also be removed and the motor fixed directly under the table. The cord could then be connected from the motor pulley (6) to the pulley (9) on the upper arm of the model. This would make a more compact and neater model.

When connecting the cord between two pulleys do not make it too tight nor too loose—a little experimenting will be necessary to get the proper tension. Meccano Spring Cord (part No. 58) is ideal for use with pulleys as it automatically adjusts itself to the proper tension. It can be purchased separately at any time.

Be sure that the model operates freely before attempting to drive it with the motor.

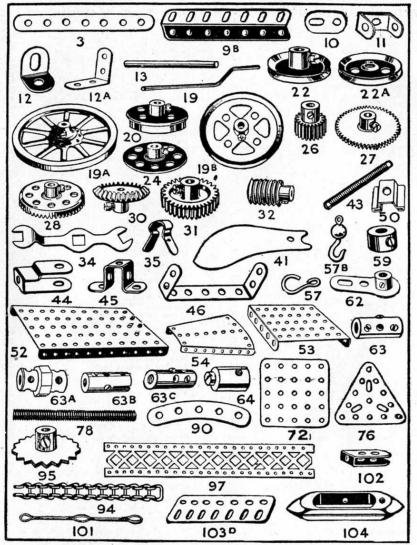
Gears for Meccano Motors

To the driving shaft of the motor is secured a pinion (10) which is used when a positive shaft drive is required instead of a belt drive. A 57-toothed gear wheel (Meccano part No. 27a), secured to a rod passed through hole 7, will mesh with the pinion on the driving shaft, and this gear wheel will rotate much slower than the pinion be-



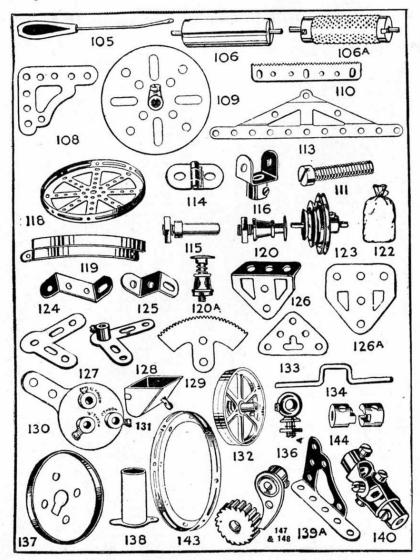
cause it is a great deal larger. However, although the speed of the second shaft is only about 1/sth the speed of the first shaft, it has about five times the power.

This is known as gear reduction and the procedure may be repeated by using a Meccano pinion on the other end of the rod which goes through hole 7. This pinion can be made to mesh with a gear wheel in the model.



Particulars and Prices of Meccano Parts

No.						Price	No.		Price
1.		ed Strips		long	doz.	. 45	24.	Bush Wheelseach	. 15
1a.		"	91"	"		. 35	25.	Pinion Wheels, ‡" diam. "	. 2
1b.			7 1 "			. 30	26.	" " " " " "	. 13
2.	"	"	51"	"		. 25			
2a.		"	41"	"		. 20		Gear Wheels	
3.	"	"	. 31"	"		. 20	27.	50 teeth (to gear with \ \frac{3}{2} pinion) "	. 30
4.	"	"	3"	#		. 20	27a.	57 " " " " " " "	. 35
5.	"	- 4	21"	44		.15	27b.	133 " 3½" diam. (to gear with ½"	
6.	"	"	2"	1400		.15		pinion) "	. 65
6a.	**	"	14"		"	.15	28.	Contrate Wheels, 11" diam "	.50
7.	Angle Gi	irders, 24	1 " long			. 25	29.		. 30
7a.	"		31" "			.20	30.	Bevel Gears	. 55
8.	"		1 " "		doz.	.60	31.	Gear Wheels, 1", 38 teeth "	. 65
8a.	44		1" "	***********		.55	32.	Worm Wheels	. 25
8b.	44		1" "	**********		.50	34.	Spanners	. 10
9.	"		1" "	*********		.45		Box Spanners "	. 20
9a.	"		1" "	**********		.45	35.	Spring Clips per box (doz.)	. 15
9a. 9b.	44		1 " "	***********			36.	Screw Driverseach	. 10
		" 3				.35	36a.	" Extra Long "	.50
9c. 9d.	"	-	1" "		*****	.35		Nuts and Bolts per box (doz.)	. 15
				*********		.30			
9e.	"	2		**********	*****	. 25	371	Nuts	. 05
9f.		. 1	1 " "	*********		. 25		Washers doz.	. 05
10.	Flat Bra					.05		Hanks of Cord each	
11.	Double I					.03	40.		. 05
12.	Angle Br					.12		Propeller Blades per pair	. 15
12a.	"				each	.05		Springs each	. 05
12b.						.05	44.	Cranked Bent Strips "	. 05
13.	Axle Rod					.10		Double Bent Strips "	. 05
13a.	" "	8"	"			.10		Double Angle Strips, 2½" x 1" "	. 05
14.	" "	61"	*	*********	"	. 05	47.	Z 1 X 1 1	.06
15.	" "	5"	"		"	. 05	47a.	" " 3" x 1½" ½ doz.	. 36
15a.	" "	41"	#	********		. 05	48.	1 2 X 4	.18
16.		31"		***************************************		. 05	48a.	47 A 1	. 20
16a.	" "	21"			"	.03	48b.	32 A 2	. 25
16b.		3"	#			.04	48c.	" " 4½" x½" "	. 35
17.		2"	40			.02	48d.	3 2 X 2	. 36
18a.	и и	11"				.02		Eye Pieces each	. 05
18b.	u u	1"	44			.02		Perforat'd Flanged Plates, 5 1 "x21" "	. 25
19.	Crank H							Flat Plates, 5¼" x 3¼"" "	. 15
	Wheels, 3					.10		Perforat'd Flanged Plates, 3½"x2½" "	. 20
19a.	**					.45		Flat Plates, 4½" x 2½" "	.12
20.	Flanged '	wheels				. 25		Perforated Flanged Sector Plates "	.20
		Pulle	y Whe	els			55.	Perforated Strips, slotted, 5½" long "	. 05
401	2" 1		-		"	25	55a.	" " " 2" " "	. 03
	3" dia. v	vith bos	s and	set scr		. 25	56a.	Instruction Manuals, No. 0-3 "	. 35
19c.	7.00					1.00	56b.	" No. 4-6 "	. 45
20a.		4		4	"	. 20	56c.	" No. 00 "	. 15
21.	11," "	"		"	44	. 20		Hooks	.02
22.	1" "	- 4		"	"	.10	57a.	" (scientific)"	. 02
23a.		46		"	"	.10	57b.	" Loaded"	. 15
22a.		. with	out	"	u	. 05		Spring Cordper length	. 30
	1	· with	out	4			59.	Collars with Set Screwseach	. 05
23.	1" "	-		0.75	-	.05	61.	Windmill Sails	.10

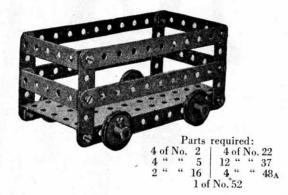


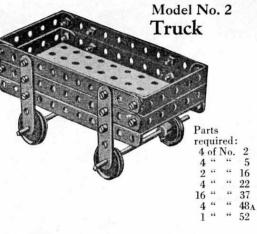
Particulars and Prices of Meccano Parts (continued)

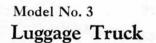
No.			Price	No.	Price
62.	Cranks ea	ich	. 15	106. Wood Rollers each	. 40
62a.	Threaded Cranks.	"	.15	106a. Sand Rollers "	. 45
63.	Couplings	*	. 15	107. Tables for Designing Machines "	. 25
	Octagonal Couplings	44	. 20	100. Alchitaves	. 09
	Strip Couplings	44	. 20	109. Face Plates, 24 diam.	. 20
	Threaded Couplings	#	. 20	110. Rack Strips, 3½"	.10
64.	Threaded Bosses	44	.06	111. Bolts, 2"	.02
65.	Centre Forks	**	.10	111a. Botts, 2	.65
66.	····	#	.20	113. Girder Frames "	.10
67.	" 25 "	#	.15	114. Hinges per pair	.20
68.	Weights, 50 gramme 25 " Woodscrews, ½" d	oz.	.10	115. Threaded Pinseach	
69.	Set Screws	"	.10	116. Fork Pieces "	.10
69a.	Grub Screws, 5 /32"		.10	117. Steel Balls, ¾ diam. "	.02
69b.	4 4 7/32"	**	.10	118. Hub Discs, 5½" diam	.50
70.	Flat Plates, 5 1 " x 2 1 " es	ach	.15	119. Channel Segments (8 to circle,	
72.	Flat Plates, 5½" x 2½"	#	.10	11½" diam.)	.15
76.	Triangular Plates, 2½"	**	. 05	120. Buffers "	. 05
77.	" " 1"	"	.04	120a. Spring Buffers per pair	. 25
78.	Screw Rods, 111/2"		. 25	121. Train Couplings each	
79.	" " 8"	#	. 25	122. Miniature Loaded Sacks 4 do	
79a.	" " 6"	44	. 20	123. Cone Pulleys each	.50
80.	" " 5"	44	.15	124. Reversed Angle Brackets, 1 4 do 125. 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	z25
80a.	" " 3½"	**	.12	125. " " " " " " "	.20
80b.	" " 41"	44	.12	126. Trunnions each	.10
81.	" " 2"	44	.10	126a. Flat Trunnions "	.06
82.	" " 1"	44	.05	127. Simple Bell Cranks "	.10
89.	Curved Strips, 5½"	**	. 05	128. Boss Bell Cranks "	.15
90.	" " 2½"	doz	25	129. Rack Segments, 3" diam. "	.20
90a.	" " 21" (small radius)	**	.25	130. Triple Throw Eccentrics "	. 45
94.	Sprocket Chainper y	ard	.25	131. Dredger Buckets"	. 15
95.	Sprocket Wheels, 2" diame	ach	. 25	132. Flywheels, 21" diam. "	.75
95a.	" 1½" "	"	. 25	133. Corner Brackets	.10
95b.	" " " "	**	.40	134. Crank Shafts, 1" stroke "	.10
96.	" " " "	44	.20	135. Theodolite Protractors "	.06
96a.	" " " "	"	.15	136. Handrail Supports "	.10
97.	Braced Girders, 3½" long			137. Wheel Flanges "	. 15
97a.		"	.18	138. Ship's Funnels	>25
98.	" " 21" "	44	.15	139. Flanged Brackets (right) "	.10
99.	" " 12½" "	**	.75	139a. " (left) "	.10
99a.		**	.60	140. Universal Couplings	. 30
99b.	" " 7 <u>1</u> " "	44	.55	142. Rubber Rings	.10
100.	" " 5½" "	"	.50	143. Circular Girders, 5½" diam	.55
100a.	" " 4½" "	#	. 35	144. Dog Clutches "	.30
101.	Healds for loomsd		. 45	145. Circular Strip, 7" diam. over all "	.50
102.	Single Bent Stripse	ach	. 05	146. " Plates, 6" ""	.60
103.	Flat Girders, 5½" long	"	. 10	147. Pawls, with pivot bolt and nuts "	.10
103a.	" " 9½" "	"	.12	147a. Pawls	.06
103b.		#	. 15	147b. Pivot Bolt with nuts "	. 06
103c.		#	.10	148. Ratchet Wheels"	. 30
103d.	The state of the s	**	.10	 Collecting Shoes for Electric Loco " 	. 55
103d.		44	.08	n	
	" " 21" "	**	.08	Brushes and Springs for Electric Mo	
103f.			.06	For motors with brush-holders project	ing
103g.		"		through the side plate:	
103h.	1 2	44	.05	Brusheseach .10 Springseacl	1 .10
103k.			.12	For motors with inside brush holders	
104.	Shuttles, for Looms		1.20		
105.	Reed Hooks, for looms	"	.10	Brushes each .15 Springs each	1 .05

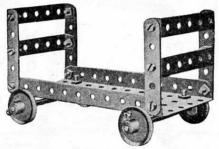
Trucks and Luggage Carts

Model No. 1 Truck with Sides



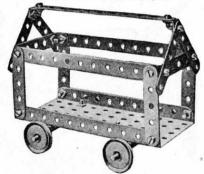




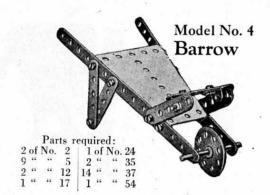


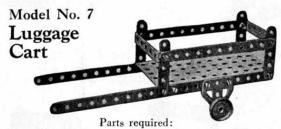
Parts required: 4 of No. 5 | 16 of No. 37 2 " " 16 | 4 " " 48_A 4 " " 22 | 1 " " 52

Model No. 5 Covered Truck





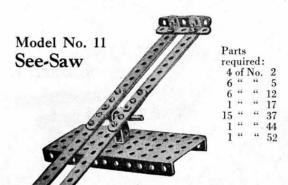


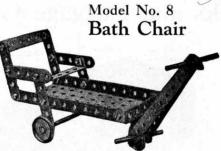


14 of No. 37 2 " " 48A 1 " " 52 2 " "126A 4 of No. 2 4 " " 5 1 " " 16 2 " " 22

Model No. 10-Timber Drag

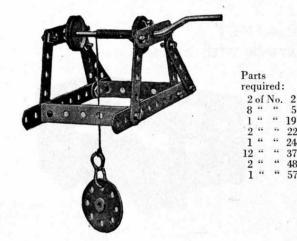




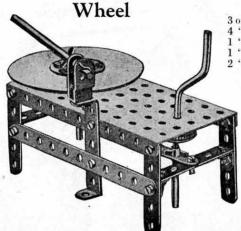


Parts	1 of No. 16	13 of No. 37		
required:	2 " " 17	1 " " 44		
2 of No. 2	3 " " 22	3 " " 48A		
6 " " 5	4 " " 35	1 " " 52		

Model No. 9-Well Windlass



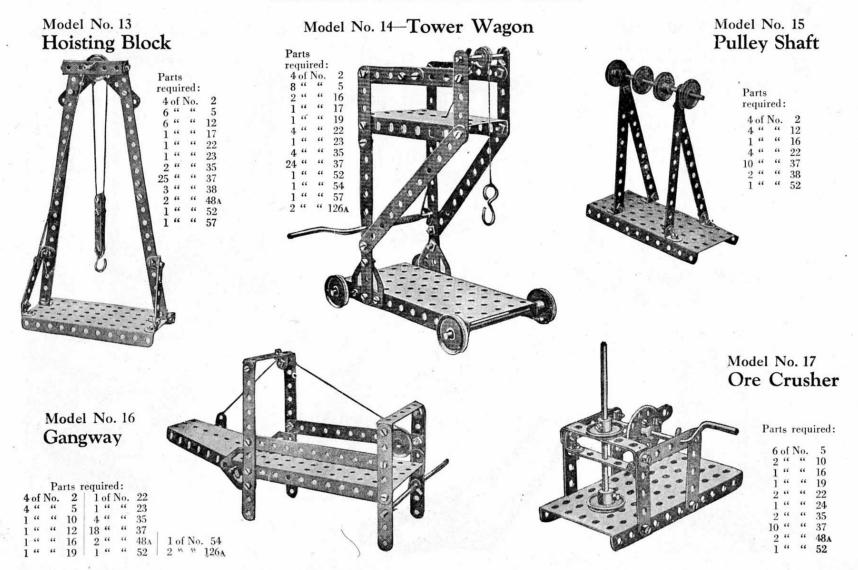
Model No. 12 Potter's

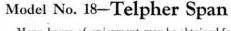


		Pε	irts	requ	ire	d:	
3	of	No.	2	1	of	No.	24
4	**	**	5	2	**	**	35
1	**	66	16	17	"	"	37
1	"	66	19	1	**	**	44
2	**	44	22	3	"	"	48A
			10	f No	59		



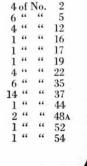
Potter's Wheel



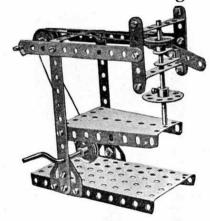


Many hours of enjoyment may be obtained from this model. The illustration shows exactly how it is worked. The cords may be made to any length, and the load carried from one side of the room to the other. In order to give a better grip, the operating cord should be wound twice round the crank handle pulley. The body of the telpher should be screwed down to a solid base with ordinary wood screws, and the pulley bracket screwed in a suitable position on the opposite side of the room.

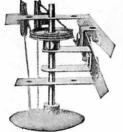




Model No. 19—Drilling Machine



Parts required: 4 of No. 2 3 " " 1 " " 11 2 " " 16 1 " " 19 4 " " 22 1 " " 24 4 " " 35 19 " " 37 1 " " 44 3 " " 484 1 " " 52 1 " " 54 9 " " 126A



Detail of

Drilling Machine.

Fig. 19A

Model No. 21-Lawn Mower

Parts required: 4 of No. 2 | 1 of No. 17 7 " " 5 | 4 " " 22 2 " " 11 19 " " 37 2 " " 16 1 " " 44 3 of No. 48A

Model No. 20—Swing

4 of No. 2

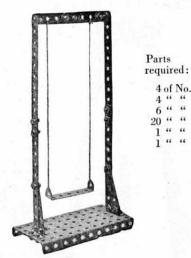
4 " " 5

6 " " 12

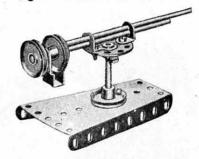
20 " " 37

1 " " 48A

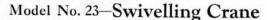
1 " " 52



Model No 22 Quick-Firing Cun



Parts required: 2 of No. 12 | 1 of No. 24 2 " " 16 4 " " 1 " " 17 1 " " 1 of No. 54

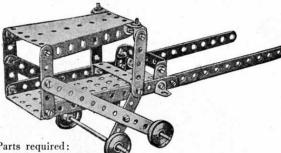


The sector plate of the Crane in this model is pivoted to the base with a fast pulley above and below.

Parts required:

4	of	No.	2	21	of	No.	37
	"	"	5	3		*6	38
	"	"	12	1	"	"	44
2	"	"	17	1	"	"	48A
1	"	"	19	1	"	64	52
4	"	"	22	1	"	44	54
1	"	"	23	1	"	66	57
2	"	"	35	2	"	44	126A





Parts required:

4 of No. 2 6 " " 5	2 of No.	16
6 " " 5	4 " "	22
2 " " 10	22 " "	37
2 " " 10 6 " " 12	1 " "	52

1 of No. 54

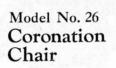


Watch

1	a	1	1	d	
a	rts				
			1		

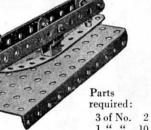
equirea:							
2	of	No.	2				
	"		23				
0	"	"	37				
1	66	**	52				
-		44					

" 125 2 " " 126A



Parts required: 4 of No. 2 5 7 " "

Model No. 27 Telegraph Key



		1	10
2	"	34	11
1	"	"	12
1	"	"	22
11	"	"	37
1	"	"	44
1	"	"	52

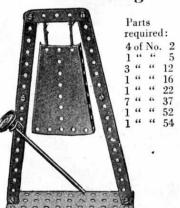
Parts required: 1 of No. 24 4 of No. 2

ModelNo. 28

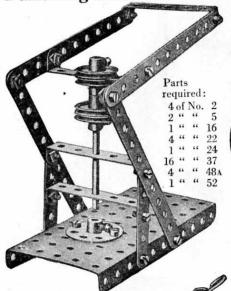
Sawing Machine

" " 17 2 " " 48A 1 " " 52 2 of No. 126A

Model No. 29 Gong



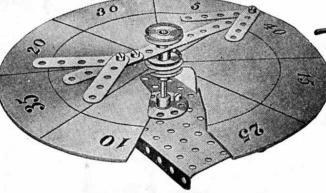
Model No. 30



Punching Machine

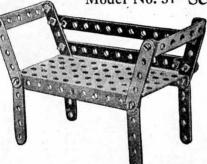


Parts	5 of No. 5	1 of No.	24
required:	1 " " 16	5 " "	37
1 of No. 2	3 " " 22	1 " "	52



Cut out a circular piece of cardboard and mark as shown to form scoring board. This is clamped between two 1" pulley wheels. The pointer revolves freely on the upright spindle and is held in position by another 1" pulley wheel.

Model No. 34-Settee



Parts required:

2	of	No.	2
8		46	5
3	**	"	10
15	"	"	37
0	"	66	40.

2 " " 48A 1 " " 52

Model No. 32 Mechanical Hammer

Parts required: 2 of No. 2 6 " " 5 " " 11 " " 12 . . 44 3 " " 48A 1 " " 52

Model No. 35 Stamping Machine

> Parts required:

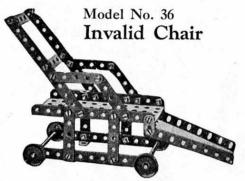
4 of No. 2 4 " " " " 48A 2 " " 126A

required: 2 of No. 2 3 " " 5 4 " " 10 4 " " 12 11 " " 37 1 " " 57

Model No. 33

Anchor

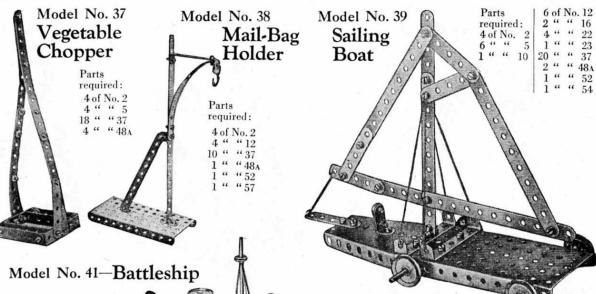
Parts



Parts	2 of No. 10	4 of No.	48A
required:	2 " " 16	1 " "	52
4 of No. 2	4 " " 22	1 " "	54
6 44 44 -	94 66 66 97	1 100	

Model No. 40-Pen Rack





Parts required:

4 of	No.	. 2	1	of	No	. 16	1 of	No.	24	2	of	No.	48A
3 "					"		3 "	"	35	1	**	**	52
4 "	"	10	4	"	"	22	19 "	"	37	1	"	"	54
1 "	"	12	1	"	"	23	1 "	"	44	1	"	"	125

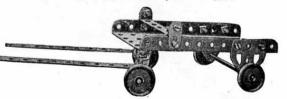
HOW TO CONTINUE

This completes the Models which may be made with MECCANO Outfit No. 0. 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 No. 0A Accessory Outfit, the price of which will be found in the list at the end of the Manual.

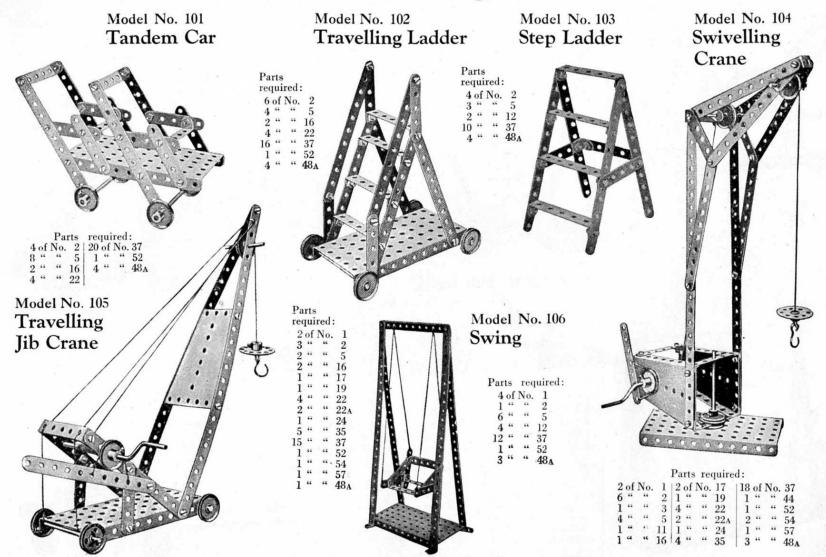
Model No. 42-Lurry

Parts required:

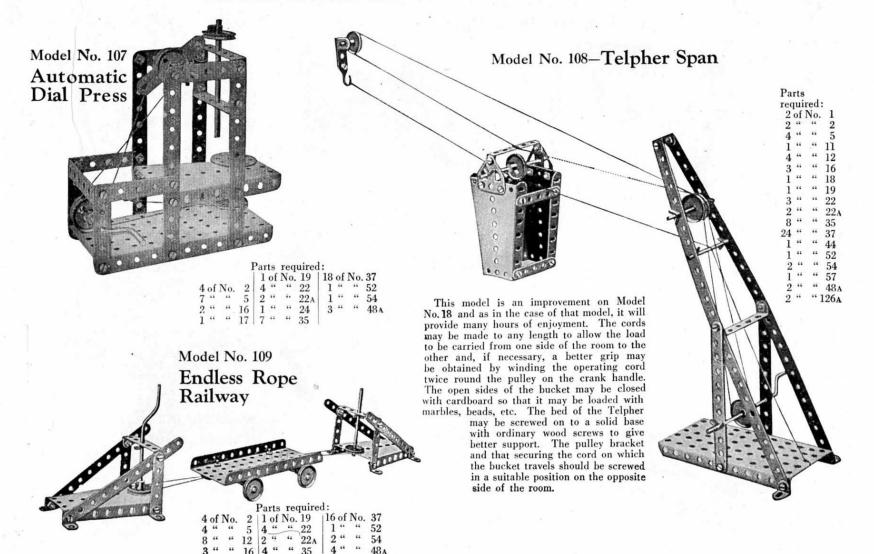
2 of No. 2	2 of No. 16	2 of No. 48A
2 " " 10	4 " " 22	1 " " 52
1 " " 11	12 " " 37	2 " " 126A



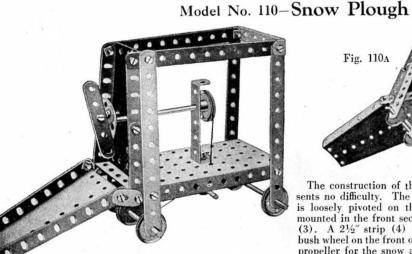
These Models can be made with MECCANO Outfit No. 1, or No. 0 and No. OA



These Models can be made with MECCANO Outfit No. 1, or No. 0 and No. Oa



14

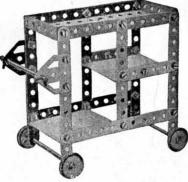


Parts required:
6 of No. 2 | 1 of No. 24
3 " " . 5 | 4 " " 35
2 " " 10 | 19 " " 37
1 " " 12 | 1 " " 44
3 " " 16 | 1 " " 52
1 " " 17 | 2 " " 54

Fig. 110A

The construction of the framework of this model presents no difficulty. The sector plate forming the plough is loosely pivoted on the bolts (1). The axle (2) is mounted in the front sector plate and the $2\frac{1}{2}$ " bent strip (3). A $2\frac{1}{2}$ " strip (4) is bolted by angle brackets to a bush wheel on the front of the axle and forms a dispersing propeller for the snow after it has risen up the inclined sector plate. A continuous cord (5) is passed around a 1" pulley (6) and round the short axle (7) and a 1" pulley on the propeller axle. In this way, as the plough is moved along the ground, the propeller is revolved.

Model No. 111 Dinner Wagon



Parts required:

		-			**	0.5
6 of	No.	2	2	of	No.	35
8 "	"	5	22	"	46	37
4 "	**	12	1	"	66	52
3 "	44	16	4	"	44	484
4 "	44	22	2	"	"	126A

The two lower platforms are constructed out of pieces of ordinary cardboard, their outer edges resting on 2½" bent strips and their inner edges on angle brackets.

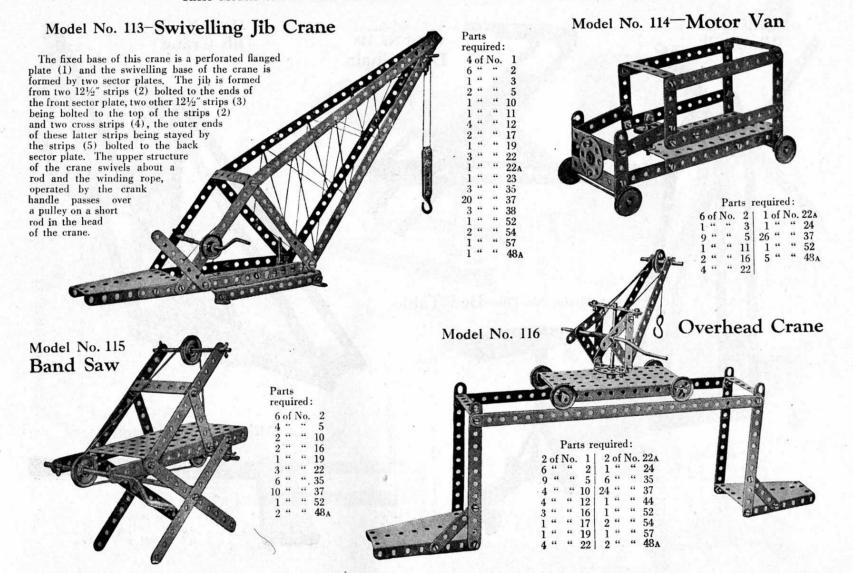
Model No. 112 Roundabout

Begin to build this model by making the platform from a flanged plate and 12½" strips. The drive from the pulley on the crank is taken to a 1" pulley fast on a spindle (2), another similar pulley being secured to the spindle beneath the plate. The arms are formed of four 5½" strips and bolted to a bush wheel (1) fast on the spindle.

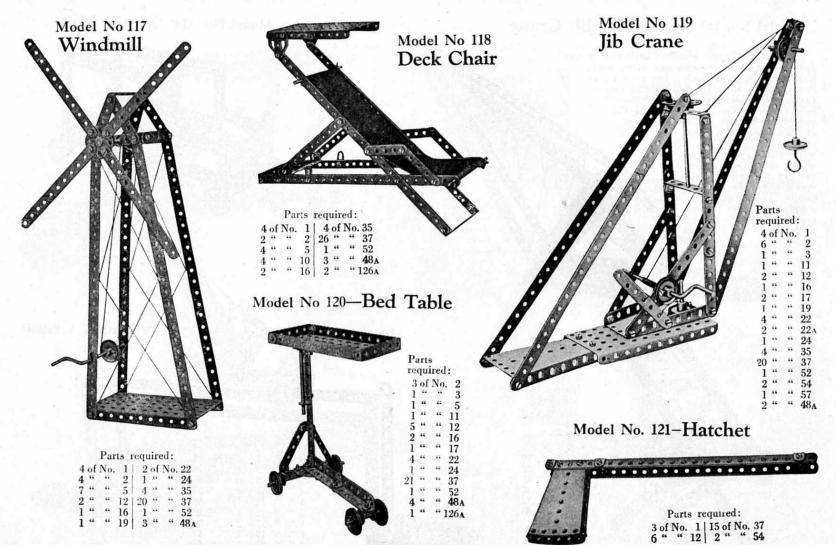


				- 1			
4	of	No.	1	3	of I	No.	22
4	44	44	2	1	**	44	24
6	"	**	5	6	**	"	35
4	"	44	10	22	**	"	37
2	"	44	16	1	66	"	52
1	"	44	17	2	66	66	54
1	"	"	19	4	"	"	48A

These Models can be made with MECCANO Outfit No. 1, or No. 0 and No. OA

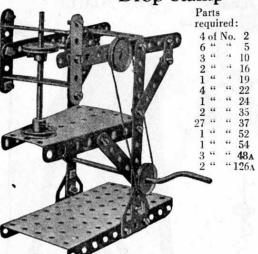


These Models can be made with MECCANO Outfit No. 1, or No. 0 and No. OA



Model No. 122

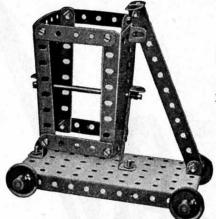
Drop Stamp



Model No. 123-Lathe



Model No. 124-Tip Wagon

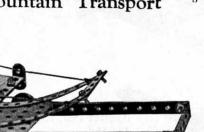


	-	red:	
2		No.	2
4	"	"	5
5	"	"	12
3	"	"	16
4	, "	"	22
2	"	"	35
14	"	**	37
1	"	"	52
2	"	27	54
2	"	"	48A

Model No. 126 Motor Lurry



Mountain Transport

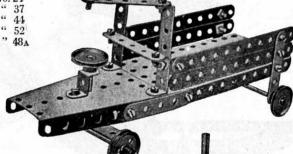


Parts required:

2	of	No).	1	3	of	No.	5	12	of	No.	16	18	of	No.	37	1	of	No.	54
2	**	"		2	4	**	44	12	4	66	- 66	22	1	"	"	52	2	66	. 66	54 48A

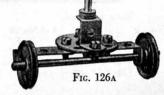
Parts required:

6 of . 4 " 1 " 1 "	No.	2	1	of l	No.	24
4 "	44.	12	17	44	**	37
1 "	**	17	1	**	"	44
1 "	44	19	1	**	"	52
3 "	"	22	2	"	"	48A

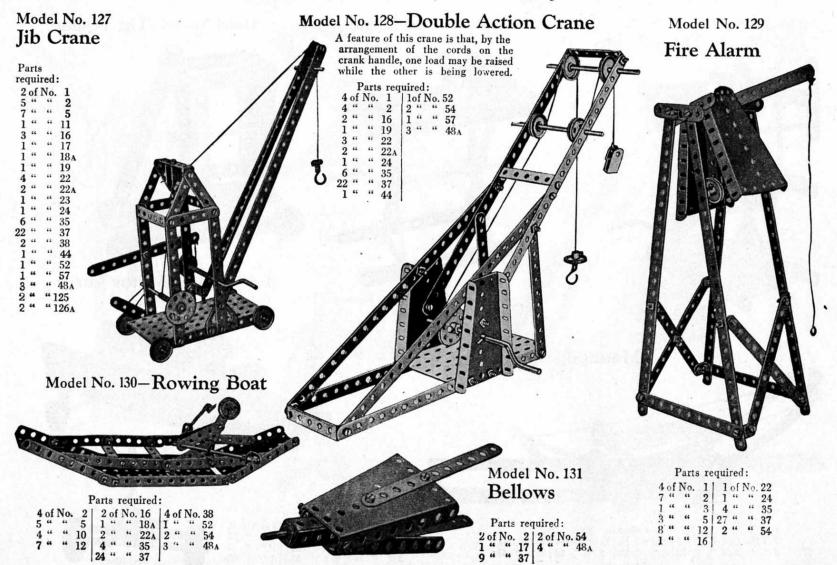


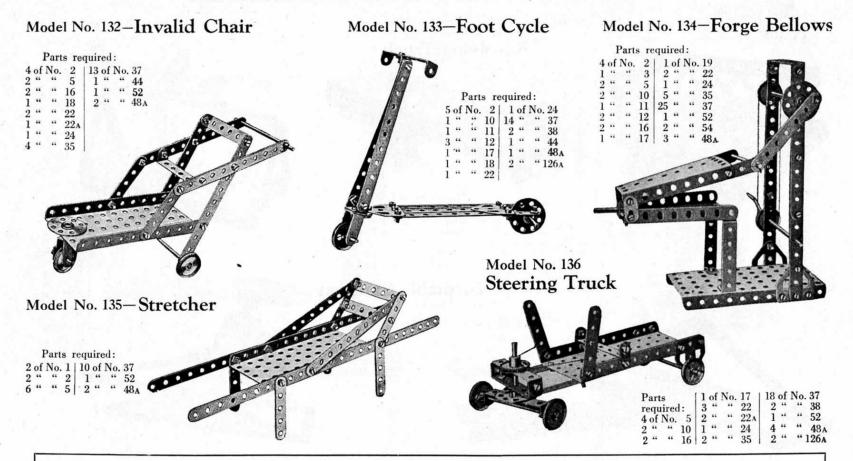
Parts required

4 of	No.	2	3	of	No.	22	3	of l	No.	. 38
8	**	5	2	**	66	22 22 _A	1	44	**	52
4 "	- 66	12	1	"	44	24	1	66	44	54
2 "	- 44	16	2	46	"	35	3	"	"	48A
1 "	"	17	25	"	**	24 35 37	12	"	44	125



These Models can be made with MECCANO Outfit No. 1, or No. 0 and No. OA



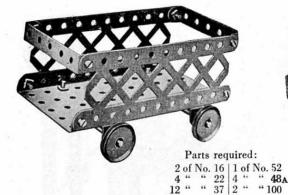


HOW TO CONTINUE

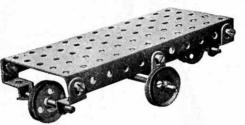
This completes the Models which may be made with MECCANO Outfit No. 1. The next Models are a little more advanced, requiring a number of extra parts to construct them. The necessary parts are all contained in a No. 1A Accessory Outfit, the price of which will be found in the List at the end of the Manual.

These Models can be made with MECCANO Outfit No. 2, or No. 1 and No. 1A

Model No. 201 Truck

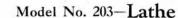


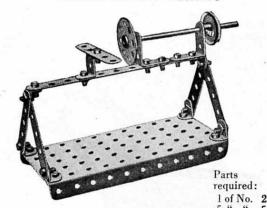
Model No. 202 Revolving Truck



Parts required:

2	of	No.	10	2	of	No.	22	6 of	No. 37
1	**	**	16	2	44	44	22A	1 "	" 52
2	**	**	17	4	**	**	35	4 "	No. 37 " 52 " 125





Model No. 204-Turntable Gangway

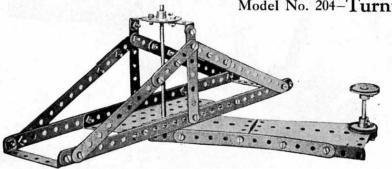
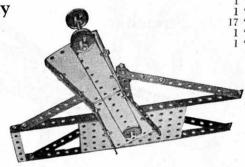


Fig. 204A (underneath view)

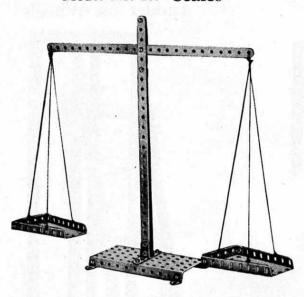


Parts required:

2 of 1	Vo.	1	4	of	No.	22
6 "	"	2	1	**	"	24
2 "	"	3	34	"	"	37
4 "	66	5	1	**	44	52
1 "	46	15A	2	44	**	54
1 "	"	17	3		"	48 _A

The side frames of the gangway are made of 12½" strips bolted by means of 2½" bent strips to parallel strips below. The side frames are connected by a perforated flanged plate to the underside of which is bolted a bush wheel fitted with a rod on which is mounted a 1" pulley (see Fig. 204A). The rod passes through one of the end holes of the sector plate which is connected by diagonal strips to another sector plate. Through the end hole of the latter a rod is threaded carrying two 1" pulleys from one of which an operating cord passes through the pulley mounted on the under side of the flanged plate. In this way the Gangway may be rotated by an operating spindle.

Model No. 205-Scales

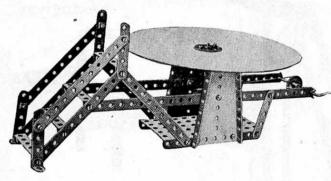


Parts required:

3	of	No.	1 12 12 _A 37	14	of	No.	38
4	"	**	12	1	44	"	52
2	44	**	12A	2	"	"	54
19	44	44	37	2	44	"	48A

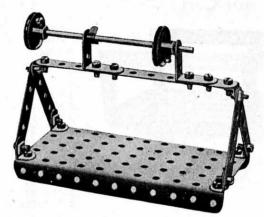
The slot is formed by inserting 2 washers in the bolts above and below the beam. These washers hold the strips composing the standard at the required distance apart to give the beam free play.

Model No. 206-Joy Wheel



The driving mechanism and construction of the framework of this model are clearly brought out in Fig. 206A. Cut out a circular piece of cardboard, 8" in diameter, and in the centre of the disc fix a bush wheel by nuts and bolts. The eye of the bush wheel is then threaded over the top of a vertical spindle, and secured by its set-screw.

Model No. 207 Polishing Spindle



Parts required:

		Parts	s req	uir	ea			
2	of	No.	1	1	of	No.	22A	
6	**	44	2	1	**		24	
6	**	44	5	2	••	••	35	
2		**	12	28	**	**	37	
1		**	15A	1	**	44	52	
1		**	19	2	**	**	54	
3	"	**	22	5	"	**	48A	

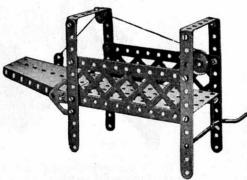


Parts required:

1	of	No.	2	1 1	of	No.	154
	"	. "	5	2	"	66	22
6	**	44	12	1	**		35
2	"	44	12A	16	44	46	37
				1	44	**	52



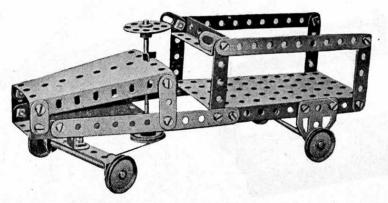
Model No 209 Gangway



Parts required:

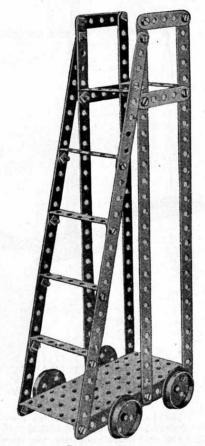
4 of No. 2 | 1 of No. 22 |
1 " " 10 | 1 " " 23 | 1 of No. 54 |
1 " " 12 | 4 " " 35 | 2 " " 48A |
1 " " 16 | 17 " " 37 | 2 " " 100 |
1 " " 19 | 1 " " 52 | 2 " " 126A

Model No. 211-Motor Cart



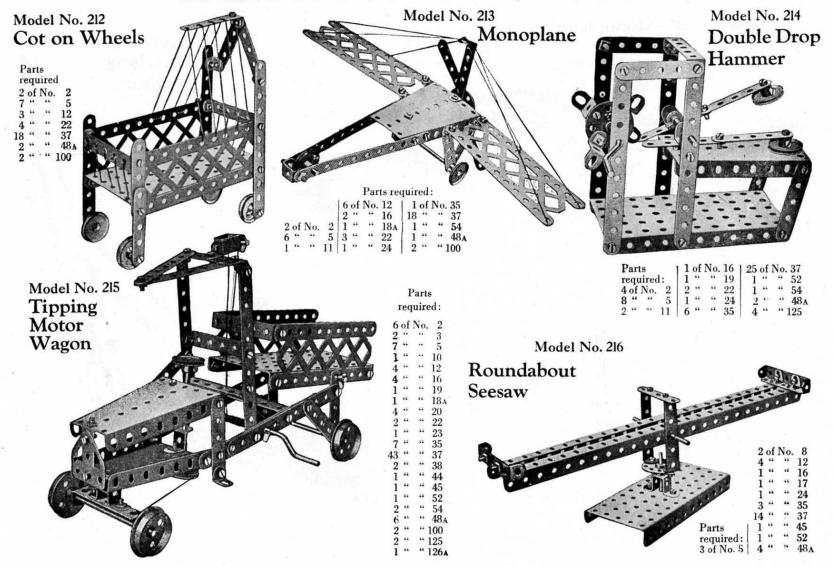
Parts required: 4 of No. 2 4 " " 5 2 " " 6A 4 " " 10 1 " " 11 3 " " 16 3 " " 22 2 " " 22A 1 " " 24 3 " " 35 26 " " 37 1 " " 52 2 " " 54 3 " " 48A 2 " " 126A

Model No. 210 Ladder on Wheels

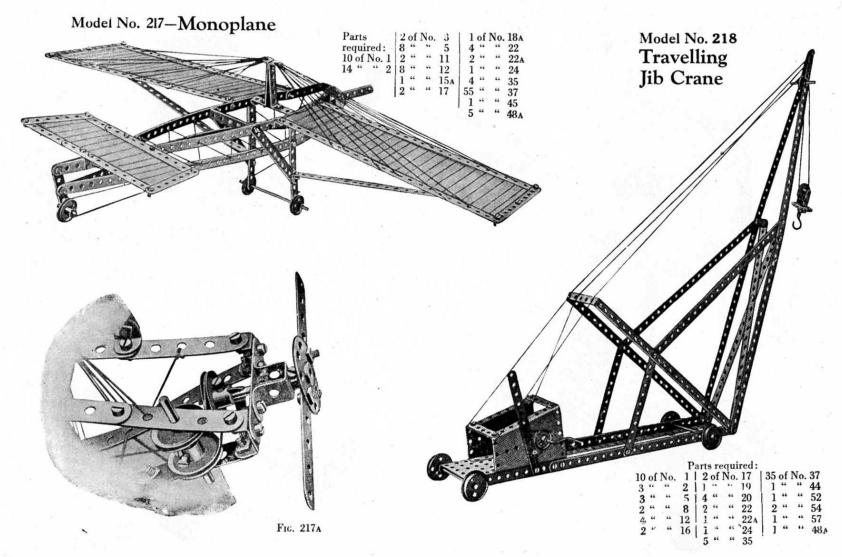


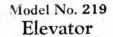
Parts required:
6 of No. 1 | 24 of No. 37
4 " " 5 | 1 " " 52
2 " " 16 | 6 " " 48A

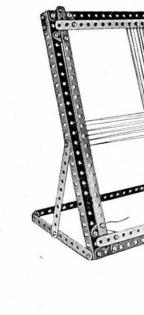
These Models can be made with MECCANO Outfit No. 2, or No. 1 and No. 1A



These Models can be made with MECCANO Outfit No. 2, or No. 1 and No. 1A







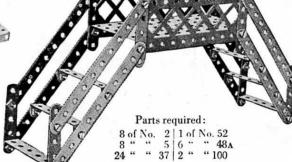
Model No. 220 Mat Frame

Parts
required:
5 of No. 1
4 " " 2
4 " " 8
8 " 10
2 " " 12
2 " " 12
36 " " 37

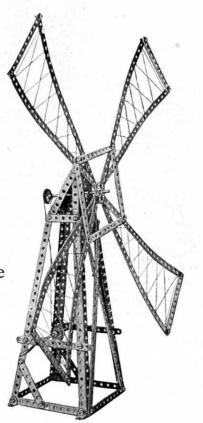
Model No. 222—High-Level Bridge

Parts required:

10	of	No.	2	1	of	No.	16	1			
1	44	44	3	1	**	**	18A	38	of	No.	37
10	**	**	5	1	**	**	19	1	14	"	44
4	**	44	8	1	**	**	22	1	**		52
2	4.	44	10	2	"	**	22A	2	**	**	54
4	"	44	12	5	"	**	35	4	"		484



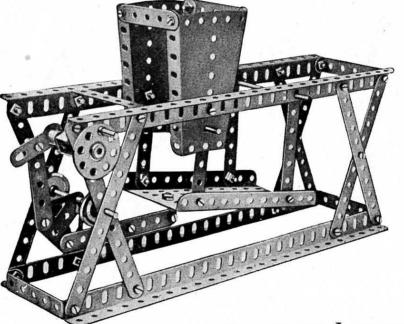
Model No. 221 Windmill



Parts required:

						No.					
10	of	Ne.	1	4		**	12	1	of	No.	24
14	44	**	2	1	66	66	15	4	**	**	35
9	66	**	3	1	"	**	19	45	**	**	37
2	46	66	5	2	44	. "	22	2	"	"	54

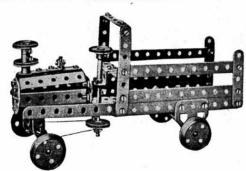
Model No. 223-Coal Sifter



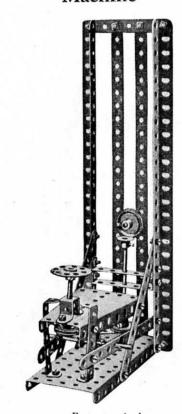
	arte	ired	. '
	of	No.	2
2	14	**	3
7	**	**	5
4		**	8
1	**	"	12
3	"	44	16
1	**	**	17
2	"	**	22
1	44	44	24
6	"	**	35
38	**	**	37
1		**	45
1	**	44	52
2	**	**	54
4	44	**	48A
1	**	**	62
î	"	"	115
ī	44	44	1264

Model No. 225-Locomotive

Parts required



Model No. 224 Try-your-strength Machine



Part	S	requ	ured	
1	of	No.	17	12
1	44	66	184	1

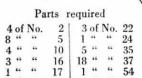
2	of	No.	1	1	of	No	. 17	12	of	No	. 38
5	**	"	2	1	**	66	18 _A	1	"	66	45
2	44	44	3	4	**	44	22	1	**	**	52
2	"	**	8	1	44	"	24	1	"	**	54
1	**	"	11	4	**	**	35	4	"	"	48A
2	"	"	16	30	"	"	37	1	"	"	126A

Model No. 226-Candy Puller



9	2.	No.	2
	01		
2	**	44	8
2	**	**	12
2	**	**	124
2	**	44	17
1	**	**	19
4	**	**	22
2	**	**	35
26	**	**	37
10	**	**	38
1	"	44	52
4	44	**	48
2	"	**	62
4	66	"	125
2	44	66	126

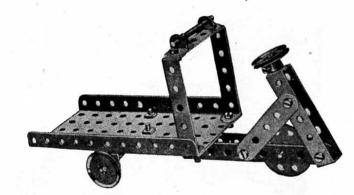
Model No. 228 Hay Tedder



000000

Model No. 227-Carrier Tricycle

Pa	art	s	
re	qu	ired	:
2	of	No.	2
3	44	44	2 5
1	44	**	11
2	**	**	12
1	**	**	16
1	**	**	17
1	"	1:	18A
3	44	44	22
1	**	**	24
2	"	66	35
15	44	44	37
1	44	44	52
	44		**





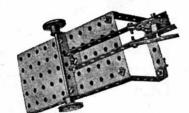


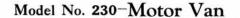
Fig. 227A

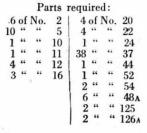
Carrier Tricycle, underneath view

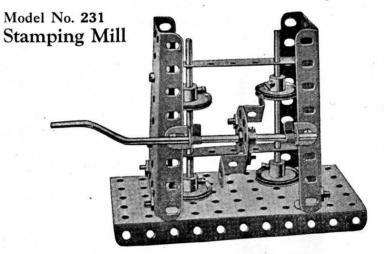
	ar		
re	equ	iired	:
8	of	No.	2
2	**	**	3
12	"	**	5
6	"	44	12
2	"	**	17
4	**	**	22
31	44	66	37
6	"	**	48

Model No. 232

Anti-Aircraft Gun



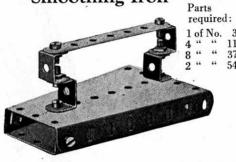




Parts required:

2	of	No.	3	4	of :	No.	22	1	of	No.	52
10	"	44	12	1	44	**	24	2	"	44	54
2	"	**	16	2	"	"	35	2	44	"	125
1	44	**	19	16	66	**	37				

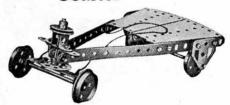




Parts required:

5	of	No.	10	4	of	No.	22	1	of	No	. 54
2	"	44	11	1	"		24	2	**		48A
2	**	44	16	4	"	44	35	4	**	**	125
2	66	"	17	12	44		37	2	44	"	126A
1	66	66	10	1 1	66	66	59				

Model No. 234 Coaster



Parts required:

2	of	No.	2	1	of	No.	17	6	of	No.	38
ī	66	66	5	4	**	44	20	1	"	**	45
2	44	44	12	1	"	**	22	2	"	"	54
1	**	44	15	1	"	**	24	11	46		48A
1	"	**	16	16	**	**	37	2	"	"	126A

These Models can be made with MECCANO Outfit No. 2, or No. 1 and No. 1A

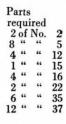


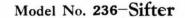
Model No. 235 Needlework Basket

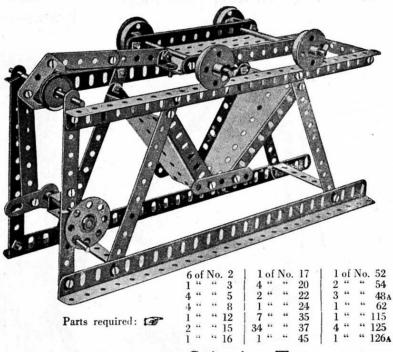
T)		
Parts	required	:

-	-	1-	
6		No.	1
6	44	**	2
2	**	**	3
6	**	**	5
12	"	66	12
46	"	**	37
1	**	44	52
2	44	66	40 .

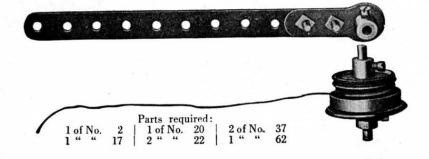
Model No. 237 Towel Rail





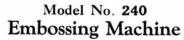


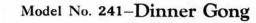
Model No. 238-Spinning Top

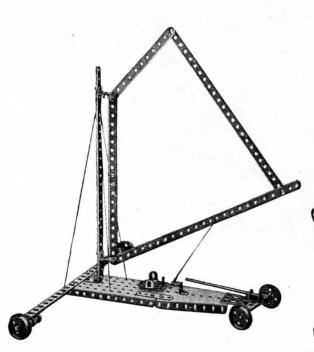


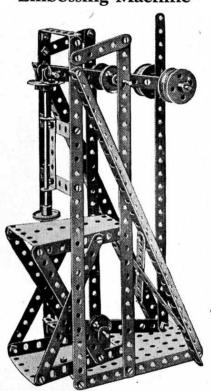


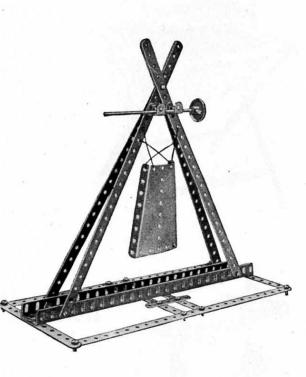
Model No. 239-Seashore Aeroplage











-			
Parts	req	uired	:

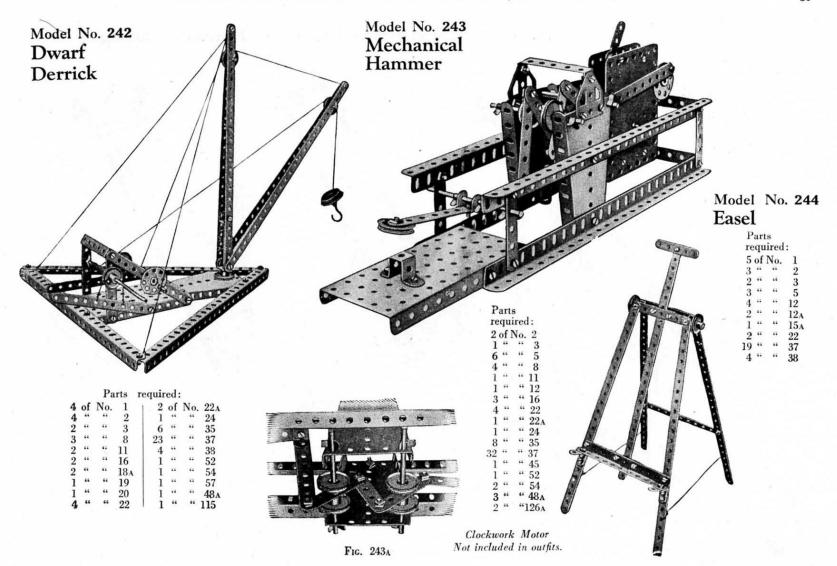
				-			1	-				
4	of	No.	1	1	of	No.	12A	1	33	of	No.	37
3	"	**	2	1	**	**	15		1	**	**	38
2	44	64	5	1	44	**	16		1	44	44	52
1	**	44	8	2	"	44	17		1	44	**	54
3	66	44	10	4	44	66	20		1	**	44	48A
3	"	**	11	1	46	**	24		1	**	44	125
7	"	44	12	6	"	**	35	1	1	**	"	126A

Parts required:

5	of	No	. 1	2	of	No.	16	44	of	No.	37
		**	2	1	44	**	17	1	"	44	44
2	**	**	5	1	**	44	18 _A	1	"	44	52
2	"	"	8	4	**	44	20	2	"	"	54
2	**	**	11	4	**	66	22	4	"	44	48
4	"	66	12	1	66	44	24	1,000			
1	"	66	15	1	44	44	35	N			

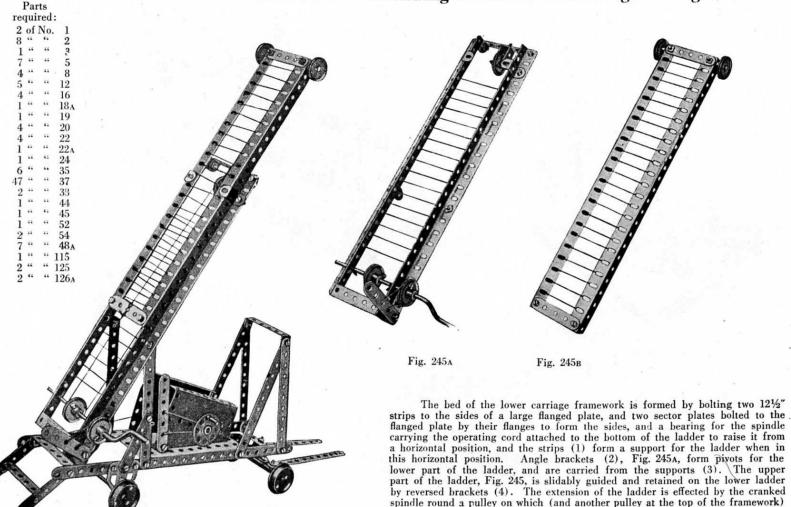
Parts required:

6	of	No.	1	1	of	No.	15
4	"	**	2	1	"	. "	22
2	"	44	5	27	**	**	37
2	166	**	8	1		."	54
2	"	"	11				



Model No. 245-Extending Ladder on Running Carriage

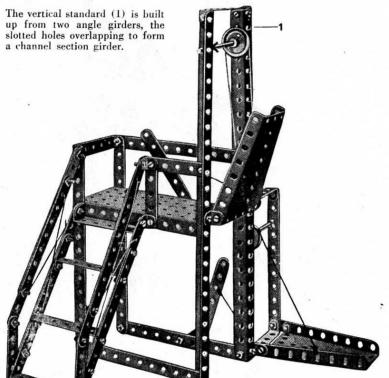
the cord is passed, the ends being secured to the lower part of the slidable ladder



These Models can be made with MECCANO Outfit No. 2, or No. 1 and No. 1A

Model No. 246

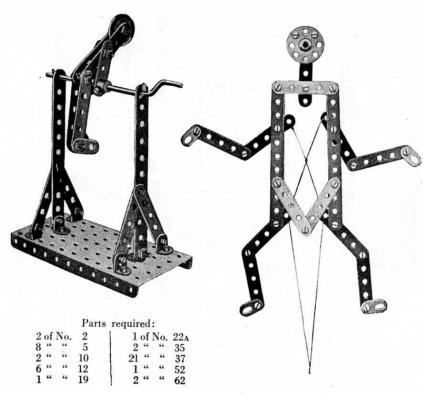
Ferry Gangway



	Parts required:	
4 of No. 2	6 of No. 12	1 of No. 45
2 " " 3	2 " 16	1 " " 52
6 " " 5	2 " 22	2 " " 54
3 " " 8	2 " 35	8 " · 48A
2 " " 10	54 " " 37	

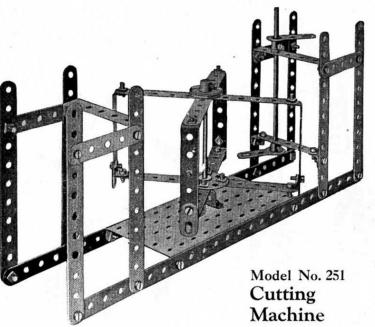
Model No. 247 The Acrobat

Model No. 248 Jumping Jack



Pa rec		red:	
2	of	No.	- 5
12	"	**	
4	"	66	10
1	"	"	2
18	"	**	3'

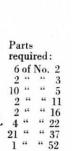
Model No. 249-Turnstile



Parts required:

			arts	requ	u.		
2	of	No.	1	1	of	No.	24
10	**	**	2	42	"	**	37
9	44	**	5	2	**	44	38
4	**	**	10	- 1	44	"	45
2	**	**	12	1	44	**	52
1	**	**	15	6	**	44	48
1	**	44	15A	2	**	44	62
2	44	44	22	J.			

Parts
required
7 of No. 2
1 " " 3
1 " " 5
4 " " 12
14 " " 37





Model No. 252



Magic Sector Plates

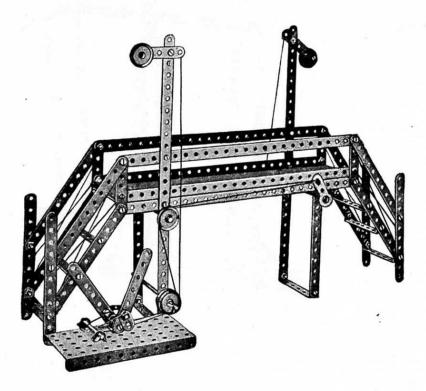
Parts required:

2 of No. 11

2 " " 35 5 " " 37

When the cord is held vertically the magic sector plates will fall or stop at the bidding of the owner. If the cord is held without tension the plates will fall, but the instant the cord is tightened they will stop dead. The cord is wrapped once around the rod which passes through the centre holes of the sector plates.

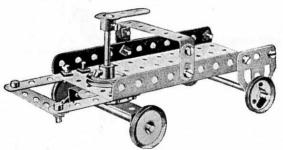
Model No. 253
Railway Foot Bridge and Signals



Parts required:	Parts	required	:
-----------------	-------	----------	---

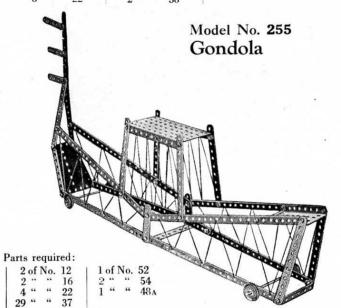
	auto required.	
4 of No. 1	1 of No. 11	2 of No. 22A
14 " " 2	2 " " 12	6 " " 35
2 " " 3	1 " " 15 _A	50 " " 37
8 " " 5	2 " " 16	1 " " 52
2 " " 8	1 " " 17	8 " " 48A
2 " " 10	3 " " 22	

Model No. 254-Motor Van



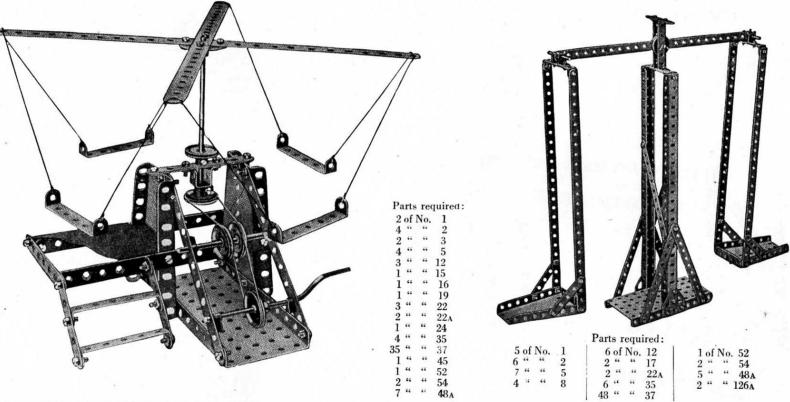
Parts required:

3 of No. 5	2 of No. 22A	1 of No. 52
2 " " 10	1 " " 24	2 " " 48A
2 " " 16	2 " " 35	1 " " 62
1 " " 17	16 " " 37	2 " " 126A
3 " " 22	2 " " 38	



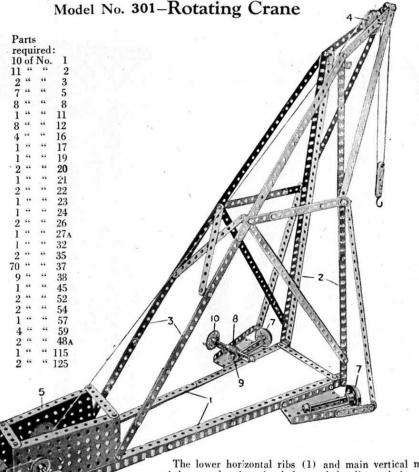
Model No. 256-Roundabout



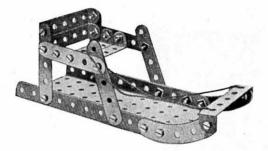


HOW TO CONTINUE

This completes the Models which may be made with MECCANO Outfit No. 2. 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 No. 2A Accessory Outfit (see page 58).



Model No. 302-Toboggan



Parts required:
6 of No. 5
20 " " 37
1 " " 52
5 " " 48a
2 " " 90

Model No. 303-Horse Sleigh



Parts required.

3 of No. 2	13 of No. 37	1 of No.	48A
4 " " 5	1 " " 52	2	90
1 " " 23	1 " " 57	- 1 " "	126A

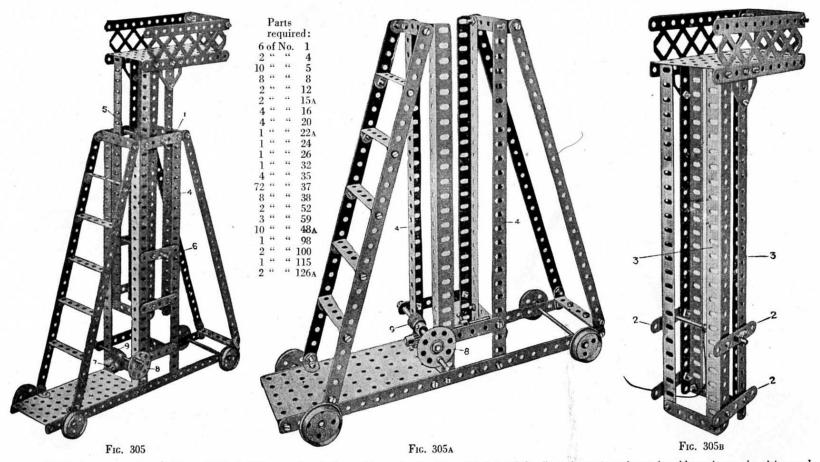
Model No. 304-Sleigh

The lower horizontal ribs (1) and main vertical members (2) are made of angle girders overlapping nine holes, and the diagonal ties (3) of two $12\frac{1}{2}''$ strips and one $5\frac{1}{2}''$ strip, the $12\frac{1}{2}''$ strips being overlapped three holes, and the lower $5\frac{1}{2}''$ strip seven holes. The pulley (4) is carried in a nosing made of two $5\frac{1}{2}''$ strips and two $12\frac{1}{2}''$ strips connected at their apex by a double bracket. The rear swivel point of the crane is made by bolting the gear box (5) to a double bent strip (6) secured to the floor. The crane runs on the flanged wheel (7) and is rotated by means of the worm (8) which engages a pinion (9) on the spindle of one of the flanged wheels and is rotated by the hand wheel (10).

Parts required:

2 of No. 2 4 " " 5 10 " " 37

Model No. 305-Tower Wagon



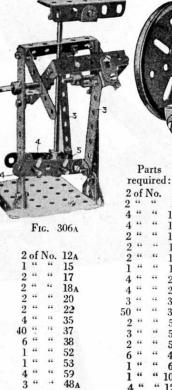
Begin the construction of this model by building up the platform, Fig. A, the tie strips (1) being left off as shown in order to be able to insert the rising and falling tower, Fig. B. The strips are then bolted on. The guide strips (2) are bolted to the girder (3) of the tower with washers beneath the strips. This gives the necessary clearance and enables the strips to rise easily up the faces of the girders (4) of the fixed lower part of the tower. The tower is raised by means of a cord which passes over a pulley (5) and is fastened to a rod (6), the other end of the cord winding on a rod (7) rotated by a hand wheel (8) on the spindle of the worm (9).

Model No. 306-Letter Balance

Parts required: 6 of No.

The connection at (1) of the rocking arms (2) to the thrust strips (3) is locknutted to give a free pivotal action, and similarly the pivotal connections (5) of the strips (3) to the lever strips (4) are locknutted to give free play.

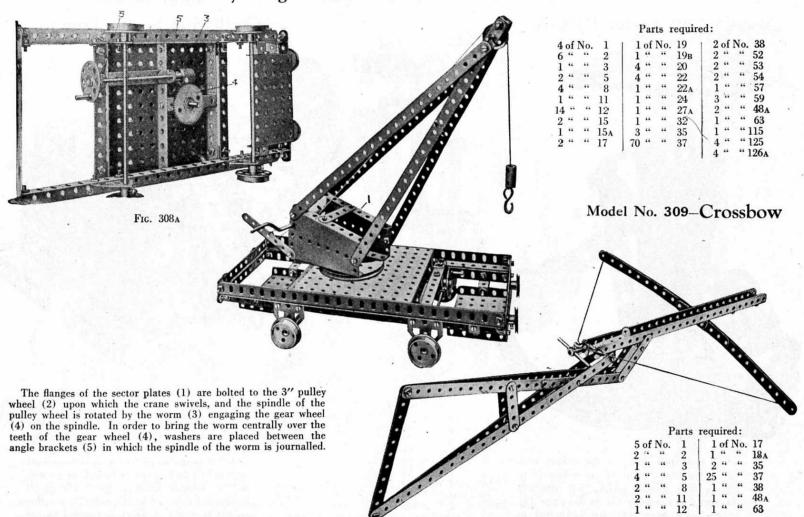
Model No. 307 Oscillating Steam Engine



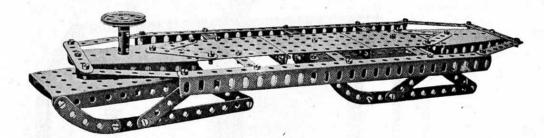
Parts

The piston rod (1) of one cylinder is pivotally connected to the crank rod (2) by means of a small double angle strip (3), and the piston rod (4) of the other cylinder is pivoted to the crank rod by a coupling (5). The cylinders consisting of four strips are enclosed by flanged wheels at the ends, and are pivoted on 1/2" reversed brackets (6). The model is operated from the handle rod (7), a pulley on the rear end of which is coupled to the pulley (8) by a cord (9).

Model No. 308-Railway Wagon Swivel Crane



Bob Sleigh Model No. 310



Parts required:

7 of No. 2	55 of No. 37
6 " " 3	2 " " 38
12 " " 5	1 " " 45
2 " " 8	2 " " 52
2 " " 11	3 " " 53
1 " " 17	2 " " 54
1 " " 21	1 " " 63
1 " " 24	4 " " 90

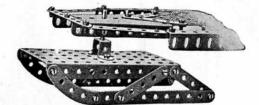
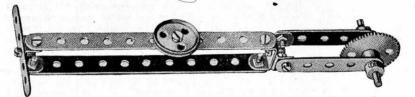


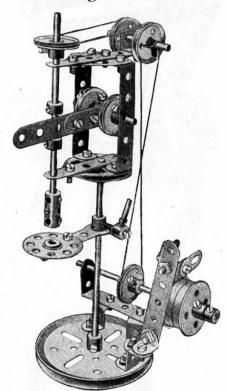
Fig. 310a

Pastry Designer Model No. 311



Parts required:

Model No. 312 **Drilling Machine**



				Par	ts	req	uired:			
2	of	No.	4	2	of	No	20	5 0	f No	. 59
2	**	. "	5	1	**	"	21	2 '		48A
2	**	**	10	4	"	44	22	2 '		62
2	**	**	11	2	46	**	22A	1 '	4 66	63
1	**	"	12	1	44	"	24	1 '		111
1	"	**	15	2	44	44	35	1 '		115
2	**	**	15A	21		"	37	3 '		125
2	"	**	17	1	**	**	44	2 '	4 46	126A
1	"	44	19 _B	1	44	"	46			

3 of No. 1

44 11 44 12

44 17

44 53

8

6 " " 1 " " 2 " "

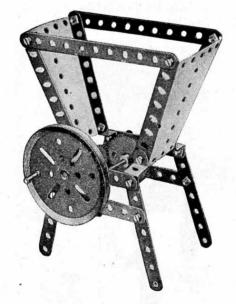
8 " "

9 " "

** **

9 " " 44 44 44

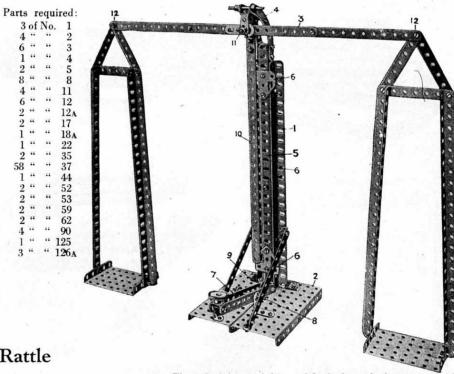
2 " " A 1 " " 125

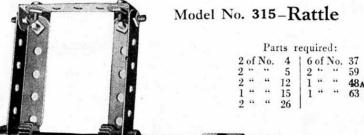


Model No. 313 Coffee Grinder

Parts required: 2 of No. 2 ** " 115 4 " " 125

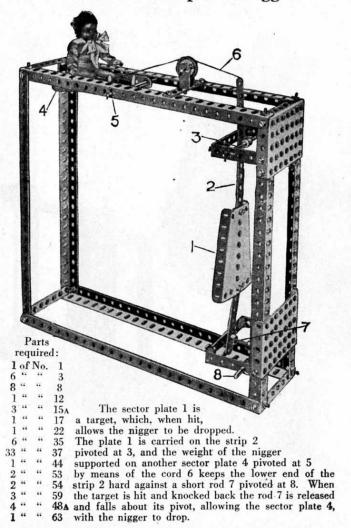
Model No. 314—Demonstration Scales



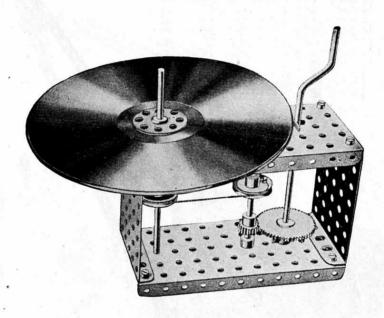


The only feature of this model which needs description is the standard which is built up of two angle girders (1) bolted to the base (2) by angle brackets and spaced apart at the top by a 21/2" strip obliquely disposed. The balance lever (3) is pivotally carried in curved strips (4) bolted to the top of two angle girders (5) sliding between the girders (1). The girders (5) are themselves bolted together and in order to guide them as they slide vertically flat trunnions (6) are bolted at the front and rear. The balance is raised by depressing the lever (8) pivoted at 9 and pivotally connected at 11 to the vertically sliding girders (5). The indicator (10) is bolted to a crank at the rear, the boss of which is fitted on the pivot rod (11). The connections at 12 are lock-nutted to allow free action.

Model No. 316-Drop the Nigger



Model No. 317-Newton's Disc

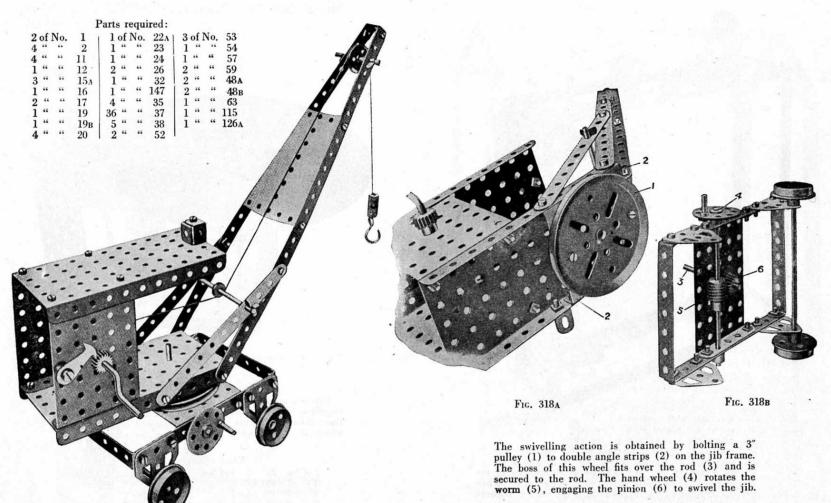


This is a model to show that white light is made up of the three primary colours—red, yellow, blue. Sectors of these three colours are mounted or painted on the disc, which if then quickly rotated, shows as white.

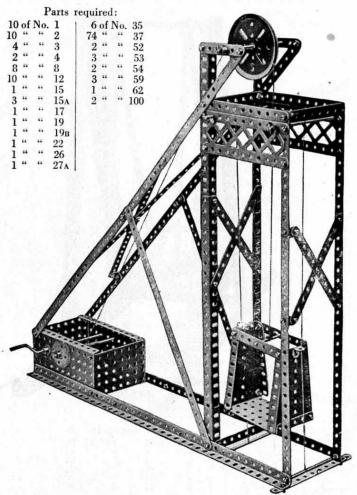
Parts required:

		- meto rodantou.		
1 of No.	15	1 of No. 24	8 of No.	37
1 " "	15A	1 " " 26	2 " "	
	19	1 " " 27A	2 " "	53
2 " "	22	2 " " 35	4 " "	59

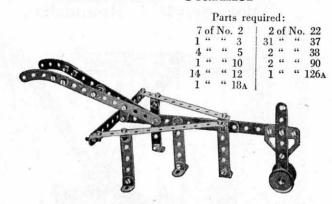
Model No. 318-Railway Breakdown Crane



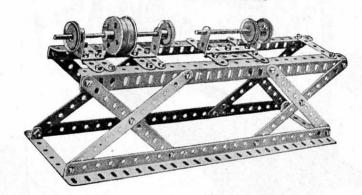
Model No. 319 Pit Head Gear



Model No. 320 Scarifier



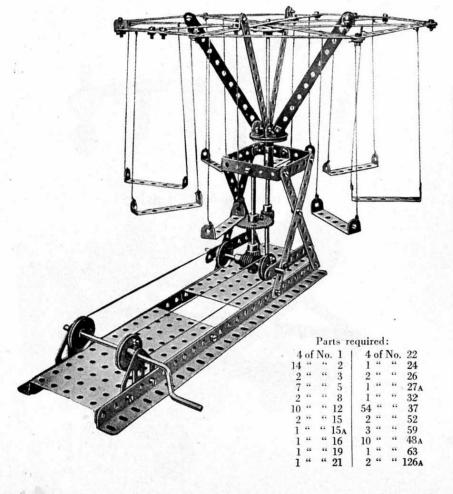
Model No. 321 Lathe



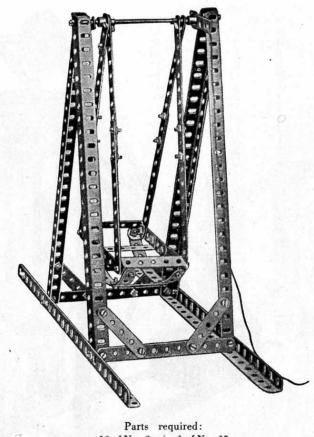
Parts required

		r	arts	requ	ire	a:	
8	of	No	. 2	1 2	of	No.	20
10	44	44	5	1	46	44	22
4	**	**	8	41	44	44	37
2	**	46	12A	1	**	**	46
1	**	**	15A	2	"	**	48
1	**	44	16				102

Model No. 322 Roundabout

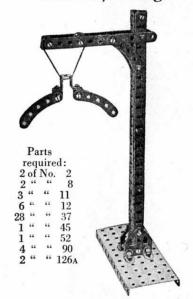


Model No. 323 Swing

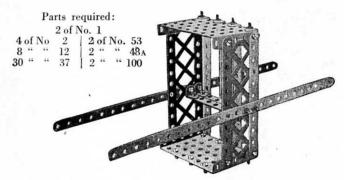


12	of	No	. 2	1	l of No-			
9	**	"	5	2	"	44	35	
6	"	44	8	43	**	**	37	
2	44	"	11	4	"	**	48A	
4	"	"	12	2	"	"	62	

Model No. 324 Railway Gauge

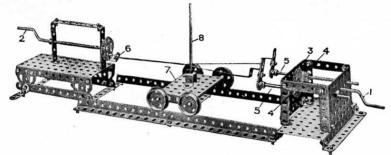


Model No. 325-Chinese Palanquin



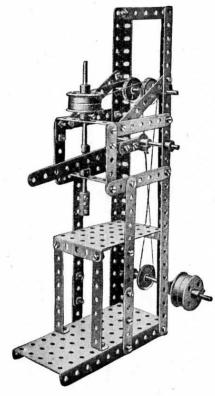
Model No. 327-Wire Rope Maker

The strands are twisted from both ends by the handles (1) and (2) of the fixed parts. The handle (1) rotates through a large gear wheel (3) two pinions (4) on the rods (5) carrying cranks to which the strands are attached. The other ends of the strands are connected to a double bent strip (6) on a bush wheel which is rotated in the opposite direction by a crank handle (2). The carriage (7) runs on rails and the vertical rod (8) is kept just at the formation of the twisted rope and so controls the tightness of the twist.



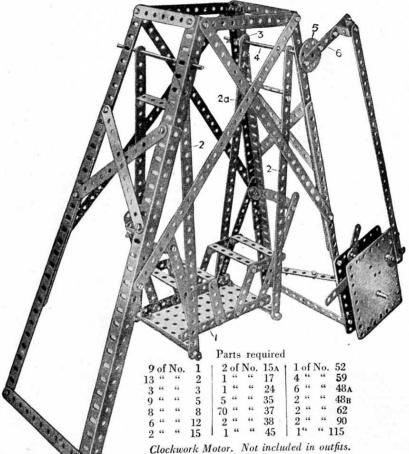
Parts	2 of No. 5	2 of No. 15	1 of No. 24	50 of No. 37 4 of No. 59
required:	2 " " 8	3 " " 15A	2 " " 26	1 " " 45 2 " " 48A
6 of No. 2	3 " " 11	2 " " 19	1 " " 27A	2 " " 52 2 " " 62
1 " " 3	12 " " 12	4 " " 20	3 " " 35	2 " " 52 2 " " 62 3 " " 53 4 " " 126A

Model No. 326 Hand Punch



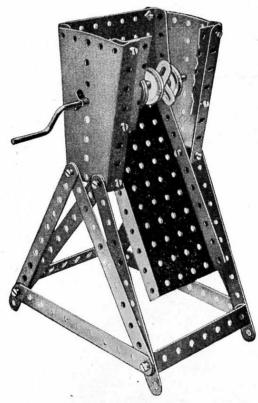
					Par	ts	req	uired	:			
3	of	No	. 2	1			No.			of !	No.	53
6	"	"	3	1.	1	44	**	22	4	44	**	59
5	"	66	5		2	"	44	22A	2	"	**	48A
2	**	44	8	1	3		**	35	2	"	44	48в
2	"	**	11	1	38	"	"	37	1	"	44	62
2	**	46	15		1	"	**	46	1	66	66	63
2	"	**	16	1	1	"	"	52	1 -			-

Model No. 328-Lawn Swing



The swing (1) is pivotally supported on four strips (2), the far strip (2A) is connected at the top to a crank (3) which is

bolted to a rod (4) and at the front end of this rod is a wheel (5) to which is bolted a strip (6) to the motor spindle.



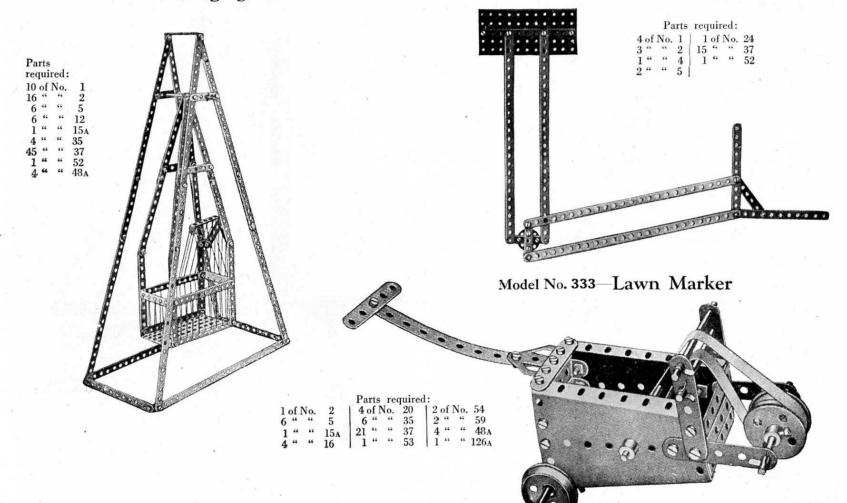
Model No. 329
Oil Cake Chopper

Parts required:

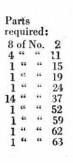
10	of	No	. 2	20 of No. 37				
4	44	44	10	1	**	44	52	
2	"	**	12	2	"	**	53	
1	"	44	19	2	"	44	54	
4	"	66	22	2	66	44	48 _B	
2	"	44	35	1				

Model No. 331-Swinging Cot

Model No. 332—Drafting Machine

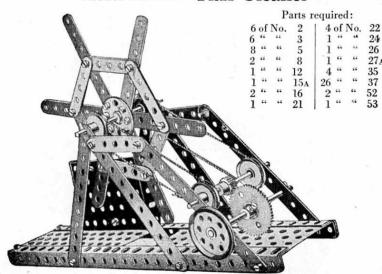


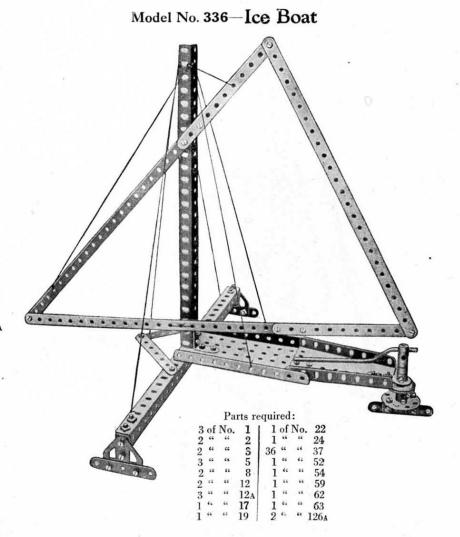
Model No. 334 Lace Jennier





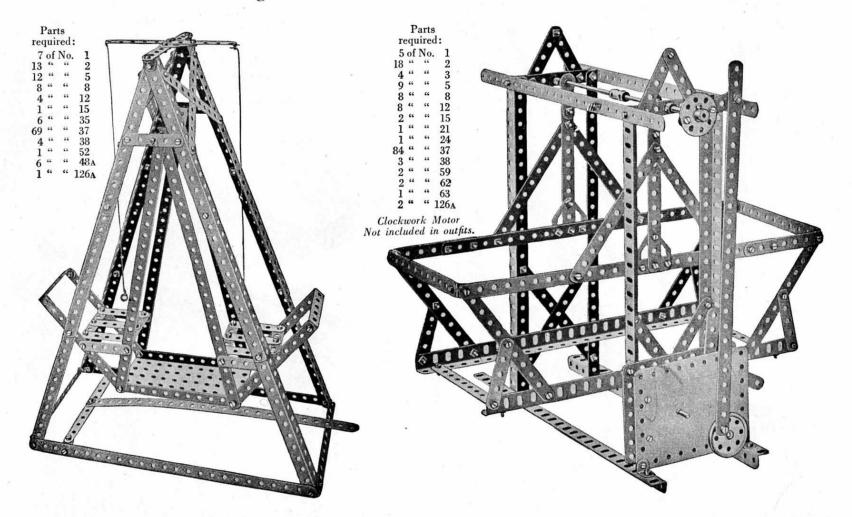
Model No. 335-Flax Cleaner





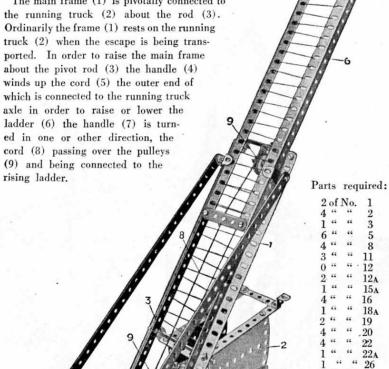
Model No. 337-Swing

Model No. 338-Automatic Swing Boat



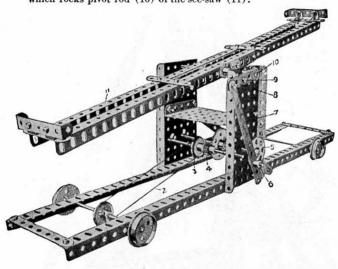
" 147

Model No. 339—Fire Escape The main frame (1) is pivotally connected to the running truck (2) about the red (3).



Model No. 340-Actuated See-Saw

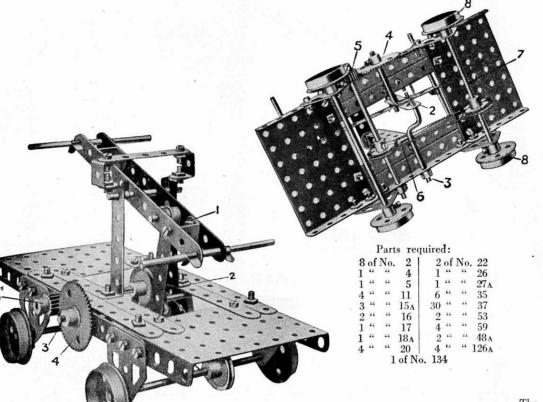
The see-sawing is actuated by the travelling action of the wheels (1). The spindle of the wheels is connected by the cord (2) to the pulley (3) on the spindle of the pinion (4) which drives a gear wheel on the spindle of the bush wheel (5). A threaded pin (6) on this wheel engages the strip (7) coupled to a lever strip (8) pivoted at (9) which rocks pivot rod (10) of the see-saw (11).



Parts required:

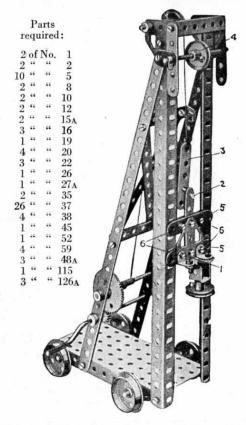
			. 2	2	of	No	. 15	1	of	No.	26	1	of	No.	. 53
			3	3	**	66	15A	1	**	**	27A				59
5	**	"	5	4	**	44	20	4	**	66	35	2	"	"	48A
8	44	44	8	2	44	"	22	36	44	66	37	2	"	**	62
4	44	44	12	1	44	**	24	2	"	**	52	1	44	"	115

Model No. 341-Hand Car



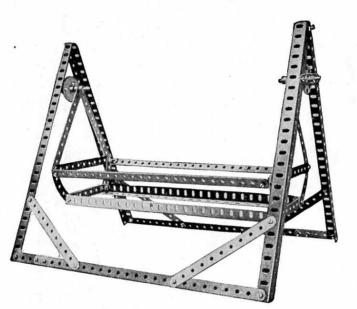
The car is caused to travel by working the rocking lever (1) which is connected by a strip (2) to a crank shaft (3) and a gear wheel (4) meshing with a pinion (5) on a rod coupled by a cord (6) to an axle rod (7) of the travelling wheels (8).

Model No. 342-Pile Driver



The driving head (1) is raised by means of a threaded pin (2) on two $2\frac{1}{2}$ " strips (3), the pin engaging in the first hole of the driving head. As the head is raised, the strip (3) makes contact with a pulley (4) and the latter pushes the strip rearwardly, disengaging the pin from the hole on the driving head, permitting it to fall. The cross strips (5) of the driving head are duplicated behind, spacing washers being inserted between them on the bolts (6) to allow free movement up and down the guide girders.

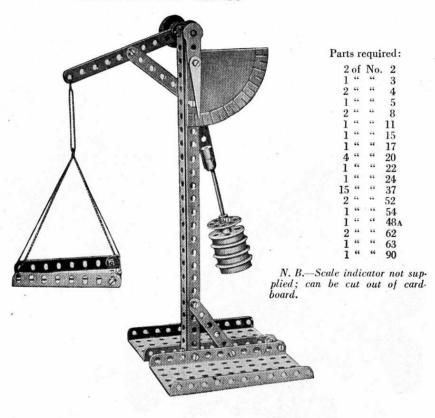
Model No. 343-Swing Cot



Parts required:

			arts 1	cquire			
4	of	No.	1	1	of	No.	27A
10	"	**	2	42	"	**	37
4	**	44	5	4	"	44	38
6	14	**	8	4	"	**	59
4	"	**	12	2	"	66	48 _B
2	66	**	17	4	"	**	90
1	66	66	24				

Model No. 344-Scales



HOW TO CONTINUE

This completes the Models which may be made with MECCANO Outfit No. 3. 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 No. 3A Accessory Outfit (see next page).

The Meccano Accessory Outfits

The illustration at the right shows a specimen of one of the Meccano Accessory Outfits. As we have already explained, these connect the main Outfits, making it possible for a boy to commence with one of the small Outfits and build it up by easy stages until he has the equivalent of the largest Outfit made. For example, if you now have a No. 3 Outfit, the addition of a No. 3A Accessory Outfit will convert it into a No. 4, with which a number of bigger and better models can be built. The further addition of a No. 4A Accessory Outfit will build your equipment into a No. 5 Outfit. By adding a No. 5A Accessory Outfit you will have all the parts included in the No. 6, which is the largest one made. You will then be able to build all of the 326 models shown in the two big Manuals and also be able to invent new models. For prices see page 58.

Accessory Outfits do not contain Motors or Transformers



The Meccano Electric Motors



How splendid it is, after spending hours in building a model, to be able to set it in motion with an electric motor, just as real engineers do! The Meccano Electric motors are made especially for this purpose and may be run from three dry batteries or direct from the house current with the Meccano Transformer. They are designed to be built into Meccano models and are the most powerful toy motors made. Two types are available—the E-1, a one-way motor which is fitted with a pulley for

belt drive and a pinion for gears; and the E-2, which is reversible and includes extra gears. For prices see page 58.

The Meccano Clockwork Motor



This motor serves the same purpose as the electric motors and is a fine piece of mechanism—simple, powerful and reliable. It is provided with the standard Meccano equidistant holes and can be built right into the model and form a rigid part of it. A starting and stopping lever is provided, and the motor is also fitted with reverse mechanism. For price see page 58.

The Meccano Transformer

Specially constructed to operate Meccano Electric Motors from the house current. A safe and reliable instrument that eliminates the expense of batteries. For alternating current of 110 volts, 60 cycles only. For price see page 58.

A Few Choice Meccano Models

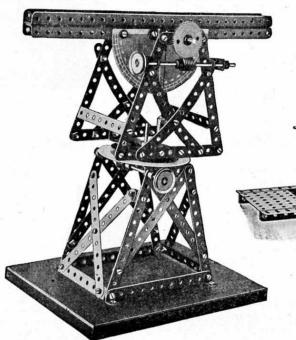
On this page we illustrate some splendid examples of the larger models that can be built with Meccano. Each one of these is a perfect working model, accurate in every detail. They represent the genius of generations of engineering experts, and will give any boy who builds them many hours of enjoyment in addition to a sound knowledge of the construction and operation of the actual mechanisms.

Hydraulic Crane

This model illustrates the operation of a Hydraulic Crane, in which great power is utilized to force two or more sets of pulley wheels apart; it is so arranged that a great movement of the load is obtained by a small movement of the operating power.

Theodolite

A Theodolite is an instrument with which angles and inclinations can be accurately and rapidly determined and distances calculated. It is used by surveyors and civil engineers for measuring plots of land, etc. The model Theodolite illustrated is easy to build and any boy can have a lot of fun with it.



Revolving Crane

Another type of crane in which the movements of both the hoisting pulley and the jib are controlled by one handle. Clutches are provided for engaging either the pulley or jib gears, and the entire crane is mounted on four wheels at right angles to each other, and they may run on rails or on a flat surface to turn the crane around.



The Meccano Magazine

The Meccano Magazine is the Meccano boy's own newspaper. It keeps him constantly informed of the latest news from Meccano headquarters—new models, prize contests, new parts, what other Meccano boys are doing, helpful hints on model-building; also interesting articles on engines, airplanes, bridges and other engineering wonders of the world. In each issue the Editor replies to letters from his readers. It is published every second month throughout the year and is mailed regularly to subscribers at the rate of 25 cents for one year (6 issues). Every Meccano boy should subscribe to it as it will help him to get much more pleasure from his Meccano outfit.

If you have not seen a copy of this fine magazine, write to the Editor, Meccano Magazine, Elizabeth Avenue, Elizabeth, N. J., and he will send you a copy free.

Meccano Price List

Complete Outfits

For convenience Meccano parts are sold in Outfits of varying size. The quality and finish of the parts are of the same high standard throughout the series. Each Outfit listed below is complete with necessary tools and illustrated instructions.

No.	00 (Outfi	t:\$1.	.00 No	. 3	Ou	ıtfi	t	9.00
66	0	66	2	.00 "	3	x*	"		10.00
"	1	"	· 3	.00	4	*	"		15.00
**	1x	+ 66	5	.00	5	*	"		25.00
"	2	66	6	.00 "	6	*	"		45.00
"	2x*	+ 66	7	.50 *H	las (elec	etri	c motor.	

Accessory Outfits

Each of the Complete Outfits may be converted into the one next larger by the purchase of the connecting Accessory Outfit. In this way, no matter with what Outfit you commence, you can build it up by degrees until it equals the largest Outfit made.

No.	0a	con	verts	a	No.	0	into	a	No.	1\$	1.25
66	la		**		"	1	**			2	3.00
"	2a	•	44	"	44	2	"	46	"	3	3.00
"	3a						66			4*	6.00
66	4a									5†	7.50
66	5a		66	"	66	5	"	"	"	6	20.00
*Ex	cept Motor.						†Ex	ce	pt T	ransformer.	

Meccano Motors and Transformers

Electric Motors

The Meccano Electric Motors are especially designed to operate Meccano models and are simple, strong and durable. They can be built right into the model and form a rigid part of it. Run on 6-8 volts and can be used with batteries or transformer.

E-1	Electric	Motor,	one-way,	with	pulley	and	pinion	\$3.50	
E-2	Electric	Motor	reversing	with	nulle	v and	ninion	4.50	

Clockwork Motors

Meccano Transformer

For operating Meccano Electric Motors direct from the house current. Safe and convenient; has no moving parts. For 110 volts, 60 cycles alternating current only. Each \$2.50

Contents of Outfits

24	2824 1 1 1 1 1 1 1 1 1
0.	5 18438846444-13884 1910400 1040408048000 10 19101 19811-184001-104010004-1400 1840 1840 1911 1408 19
44	4 100100100044004 14004
4	1 12 12 12 12 12 13 14 x 12 14 x 12 14 x 12 14 x 14 15 x 14 16 x 14 16 x 15 x 16 x
34	8 18 14 14 14 14 15 16 16 16 17 17 18 18 18 18 18 18
2	3 8 500 1 100 100 100
2A	
2	3 4 9 13 9 4
14	ο - -
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V	7
0	
8	
Description of Fart	Perforated Strips, 121 " Angle Girders, 121 " Elat Brackets Double Brackets Angle Brackets Angle Brackets 24 " 25 " 26 " 27 " 28 " 29 " 29 " 29 " 29 " 29 " 29 " 29 " 29

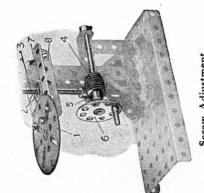
Contents of Outfits (Continued)

Describation of Larv	8	0	ν0	-	1.4	C3	2.4	63	34	4	44	5	
Braced Girders, 34"		1		:	:	:	:	:	į	!	- 1	- 1	
3	1	::	****	-	1	1	1	1	1	-	-	٦.	
123,"		:	:	:	:	!	:	:	4	4		41	
	:	:	21	21		21	1	21	4	9	- 0	-	
Single Bent Strips.	-	****	1	1	****	:	1		1	1	24	21	
Flat Girders, 24"	1	****	:	:	:	1	1	*	24.6	210		2) (
1	:	:	1	:		:	:	:	.7.	ν,	1	. 17	
53		:	1	****	:	:		*	-	-	-	-	
Strips,	:	į	į	****			10	10	1		:	:0	
Bolts, ‡"	!	1	****	-	:	i	71	7	٠,	00		00	
Chreaded Pins.	:		:	i	-	-	1	٦,	-	N		77 -	
Fork Pieces	:	****	4411	*****	:	***	-	-	****	-		-	
Cone Pulleys	-		;	!	!	1		:	:	:	;	:	
Reversed Angle Brackets, §"	21	21	-	21	27	4	-	4		4	*****	4	
Prunnions	01	C)		21	*****	67	-	23	*****	21	-	21	
dat Trunnions	21	2	1	01		01	01	4		4	-	0	
Boss Bell Cranks.	1	1	-	!	1	1	-	1	10	!	1.	- 0	
Triple Throw Eccentrics.		:	1			1	:		77	Ν,	-	Ν,	
nk Shafts, 1" stroke.			****	Anna	****	1	-	-		-		-	
Theodolite Protractors.		:	***	****		1	-	1		****		1	
Pawls, with pivot bolt and ruts	1	-	1	:	****	4000	-	-		н,	*****	٠,	
Ratchet Wheels	1	:		1	1	1	-	-	:		-	4 -	
Electric Motors	:	:	****	-		į		***	-	-	****	٦,	
Transformers								9	-				

2 and 3 respectively, NOTE: Outfits Nos. 1x, 2x and 3x have the same contents as Outfits Nos. 1, and in addition an Electric Motor.

Mechanisms Standard Meccano

Model-builders Book for Reference Standard The



Screw Adjustment

In this example the use of the Threaded Rod for adjusting the height of the table of a drilling machine is illustrated. The construction is fully described in "Meccano Standard Mechanisms."

movements have been arranged so that immediate refis desired to incorporate in a model. At the left is illustrated one of the many standardized movements dealt with in this book; among the others are the have been collected and classified and erence may be made to any particular motion that it From time to time a number of Meccano movements without alterahave been designed and have become standardized-The are now published in this new book. they may be applied to many models These following:

Partial List of Contents

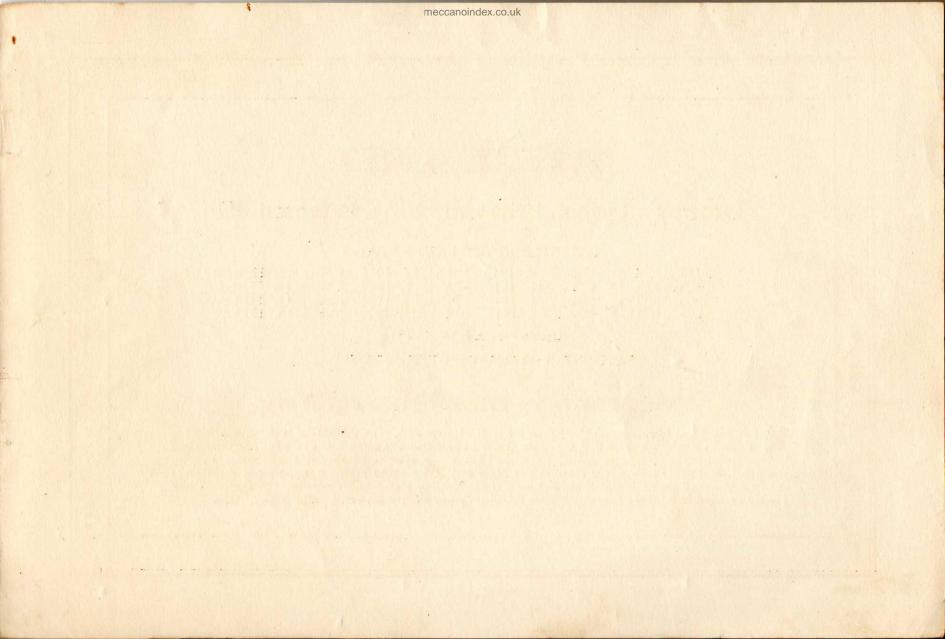
CLUTCHES AND REVERSING GEARS DRIVE CHANGING MECHANISM PULLEYS AND PULLEY BLOCKS ROLLER AND BALL BEARINGS STEERING GEARS, ETC., ETC. MECHANISM LEVERS, BRAKES GEAR RATIOS SCREW

Every Meccano Boy should have a Copy

Š "Meccano Standard Mechanisms." The price of this new manual is 50 cents and a copy will be mailed to any address postpaid on receipt of remittance. This new book is of special value to the boy who likes to invent new models and will designed movements in his models. jo give him much help in incorporating correctly designed movements in his keen Meccano boy will consider his equipment complete without a copy

MECCANO COMPANY, Inc.

Elizabeth, New Jersey



MECCANO

Hornby's Original System, First Patented 1901



PATENTED IN THE UNITED STATES

Jan. 16, 1906	Jan. 4, 1916	Oct. 24, 1916	Oct. 19, 1920
Nov. 18, 1913	Feb. 15, 1916	Oct. 9, 1917	Dec. 14, 1920
Nov. 23, 1915	Aug. 1, 1916	Dec. 24, 1918	Apr. 11, 1922
Dec. 21, 1915	Aug. 29, 1916	Feb. 11, 1919	May 15, 1923

Design Patent July 4, 1916

PATENTED THROUGHOUT THE WORLD

Meccano is more than a Toy

T is important to remember that when a boy is playing with MECCANO he is using engineering parts in miniature, and that these parts act in precisely the same way as do the corresponding engineering elements in actual practice. No other system of model construction can be correct, and other toys which attempt the same object by other methods must avail themselves of constructive elements which are not correct engineering elements. Consequently, though a boy may succeed in building playthings with them, they are merely toys and nothing else.