

MECCANO

TRADE MARKS 296321, 501113, 76, 12633, 10274, 55/13476, 569/13, 884/25, 2913, 80, 124, 338, 4174, 91637, 83171, 157149, 32822, 200639, 209733, 214061, 214062, 12892, 29094, 33316, 1818, 16787, 383/13, 5848, 50204, 10/12258, 22826, 18982, 20063/925, 9048, 5549, 2189, 16900, 72286, 2389, 41812, 5403, 7315, 18066, 139420, 404933, 4.5.6, 29041, 26877, 6595, 404718, 410379, 55096, 19240, 410374, 5992, 1955

HORNBY'S ORIGINAL SYSTEM—FIRST PATENTED 1901

INSTRUCTIONS

FOR OUTFITS

00 to 1

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No. 33.1

English Export

MECCANO

The Finest Hobby in the World for Boys

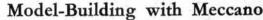
The Meccano system is composed of over two hundred and fifty different parts, mostly made of steel or brass, each one of which has a definite mechanical purpose. These parts combine to form a complete miniature engineering system with which practically any mechanical movement may be reproduced in model form. More can be accomplished with Meccano than with any other constructional toy, for no other system has such possibilities. The genius is in the parts and you can commence to build models as soon as you get your Outfit home. A screwdriver, provided in the Outfit, is the only tool necessary.

There is no limit to the number of models that can be built with Meccano—Cranes, Clocks, Motor Cars, Ship-Coalers, Machine Tools, Locomotives—in fact everything that interests boys. The most wonderful feature about the system is that it is real engineering in miniature; it is fascinating and delightful and it gives

you a satisfaction beyond anything that you have ever previously experienced.

The "Meccano Magazine"

The Meccano Magazine is the Meccano boy's own newspaper. It tells him of the latest Meccano models; what Meccano Clubs are doing; how to correspond with other Meccano boys; the Competitions that are running, etc. It contains splendid articles on such subjects as Railways, Famous Engineers and Inventors, Electricity, Bridges, Cranes, Wonderful Machinery, Aeronautics, Latest Patents, Radio, Stamps, Photography, Books and other topics of interest to boys, including suggestions from Meccano boys for new Meccano parts and correspondence columns in which the Editor replies to his readers' enquiries. The publishing date is the first of each month. If you are not already a reader of the Meccano Magazine write to the Editor for full particulars, or order a copy from your Meccano dealer or from any newsagent.

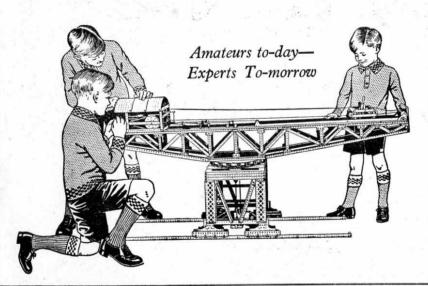


Make the simple models first—they will provide hours of fun—and then try to improve them. Every model can be made in a dozen different ways. It is important to screw up all the nuts and bolts tightly to ensure that your models will be strong and firm when they are completed.

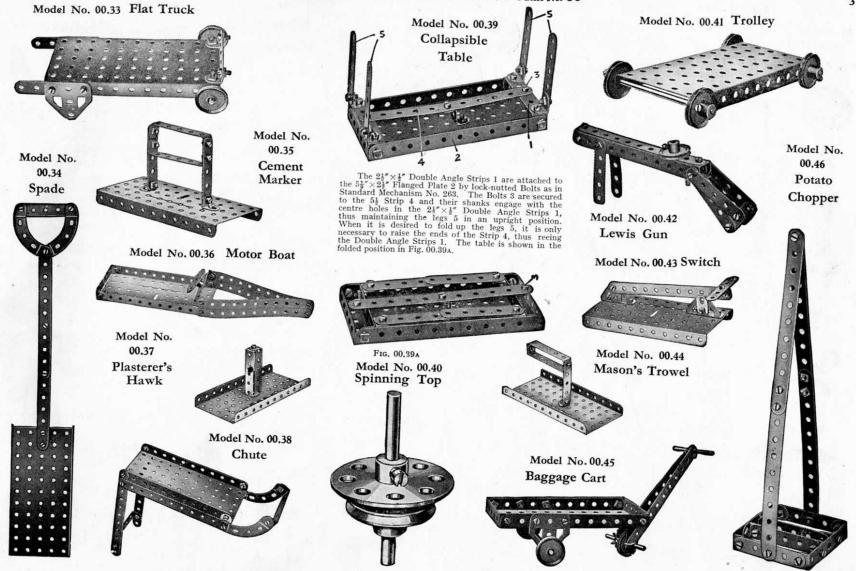
Every keen and inventive Meccano model-builder should obtain copies of the special Manuals "How to use Meccano Parts" and "Meccano Standard Mechanisms." In the former the principal uses of Meccano parts are outlined, while the latter shows a large number of real engineering mechanisms, built of Meccano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

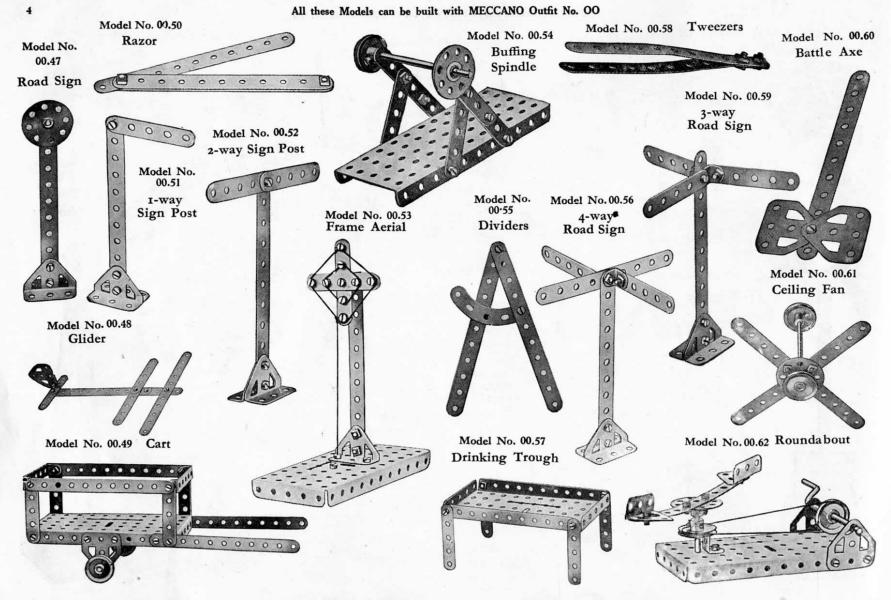
How to Build up Your Outfit

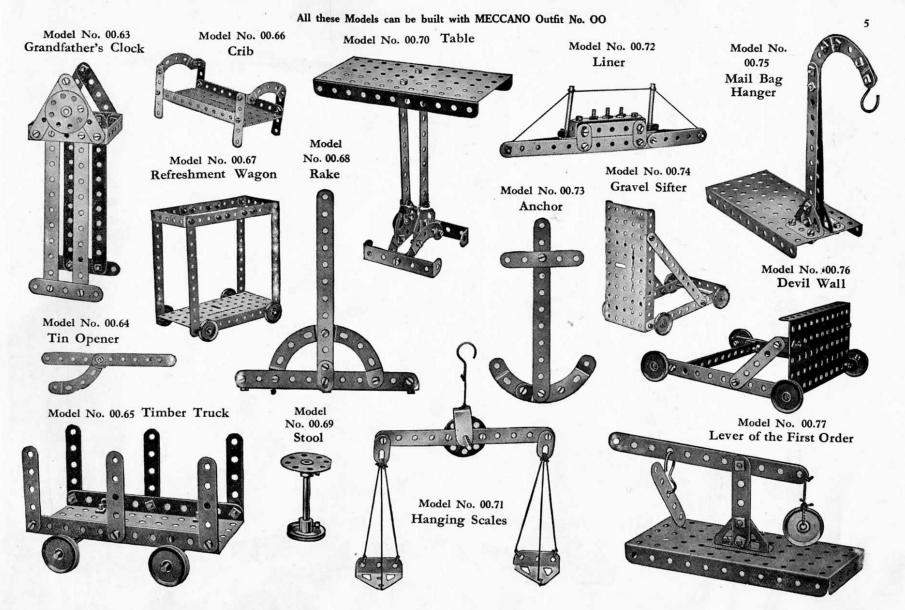
Meccano is sold in ten different Outfits, numbered 000 to 7. All Meccano parts are of the same high quality and finish, but the larger Outfits contain a greater quantity and variety of parts, making possible the construction of more elaborate models. Each Outfit from No. 00 upwards may be converted into the one next higher by the purchase of an Accessory Outfit. Thus, a No. 00 may be converted into a No. 0 by adding to it a No. 00a. A No. 0a would then convert it into a No. 1, and so on. In this way, no matter with which Outfit you commence, you may build it up by degrees until you possess a No. 7 Outfit. It is important to remember that Meccano Parts may be bought separately at any time in any quantity from your Meccano dealer.

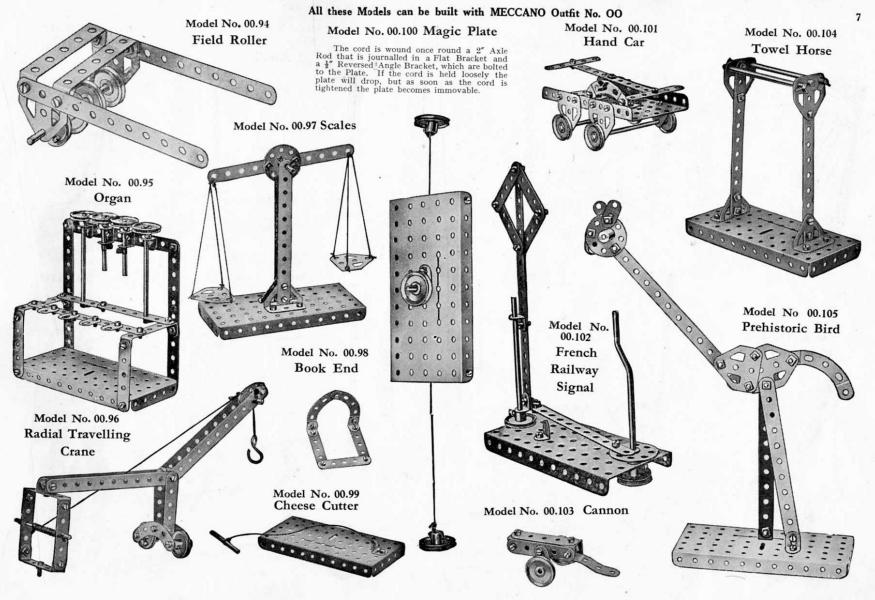


All these Models can be built with MECCANO Outfit No. OO

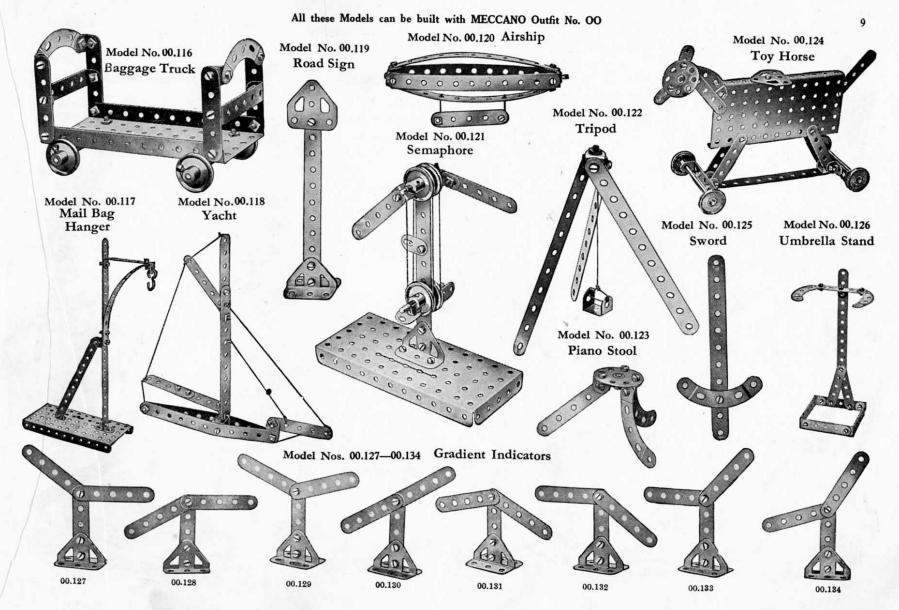


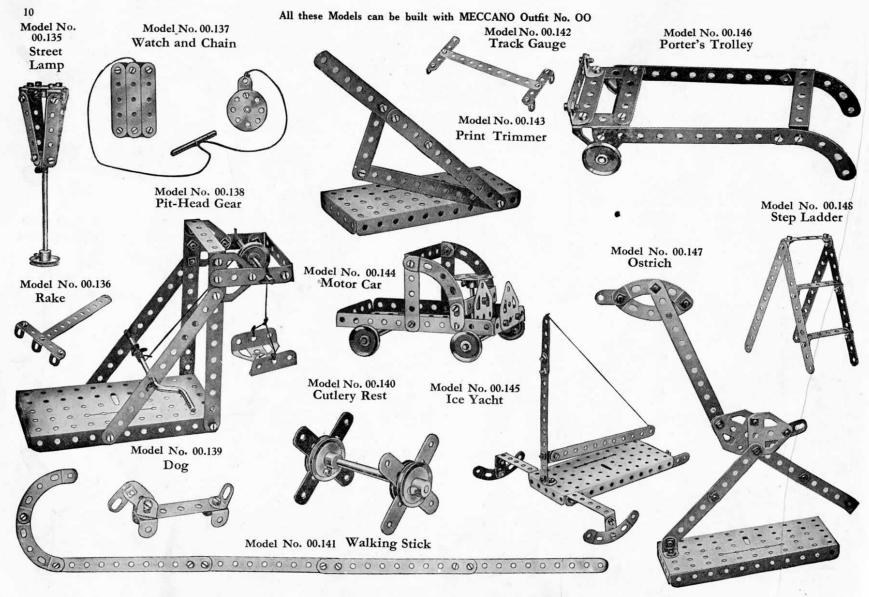


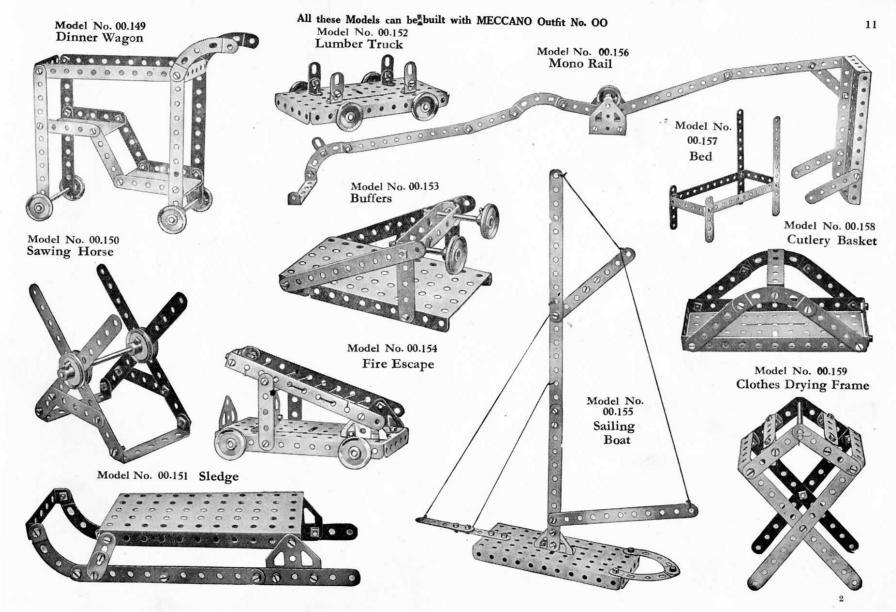




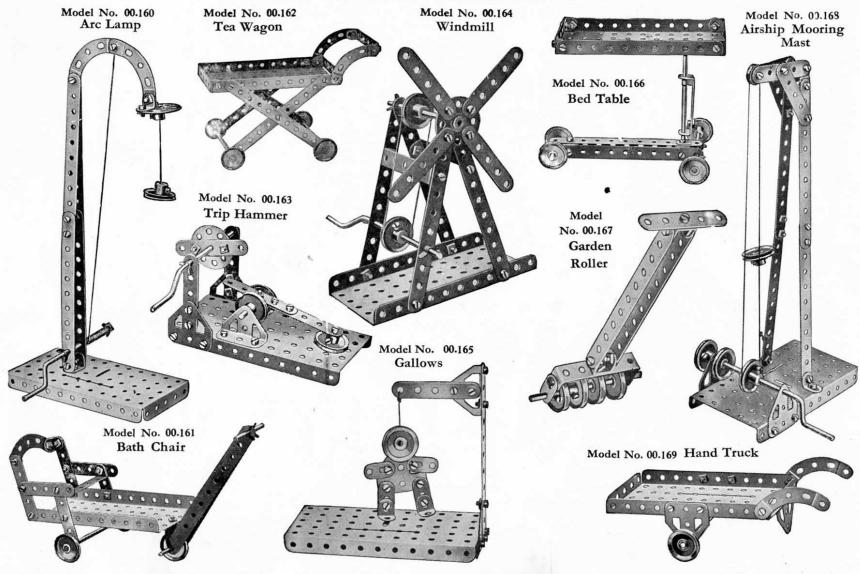
Model No. 00.111 Timber Wagon







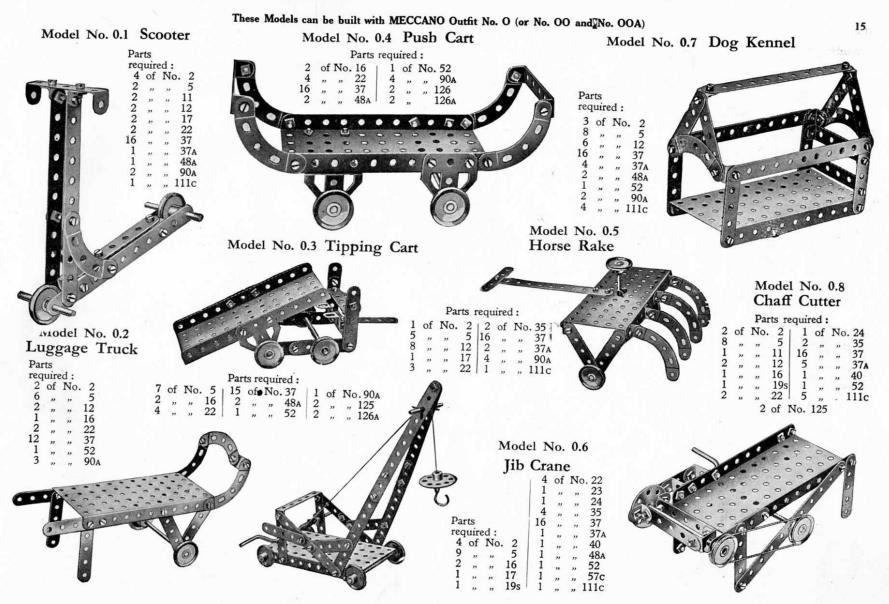
All these Models can be built with MECCANO Outfit No. 00

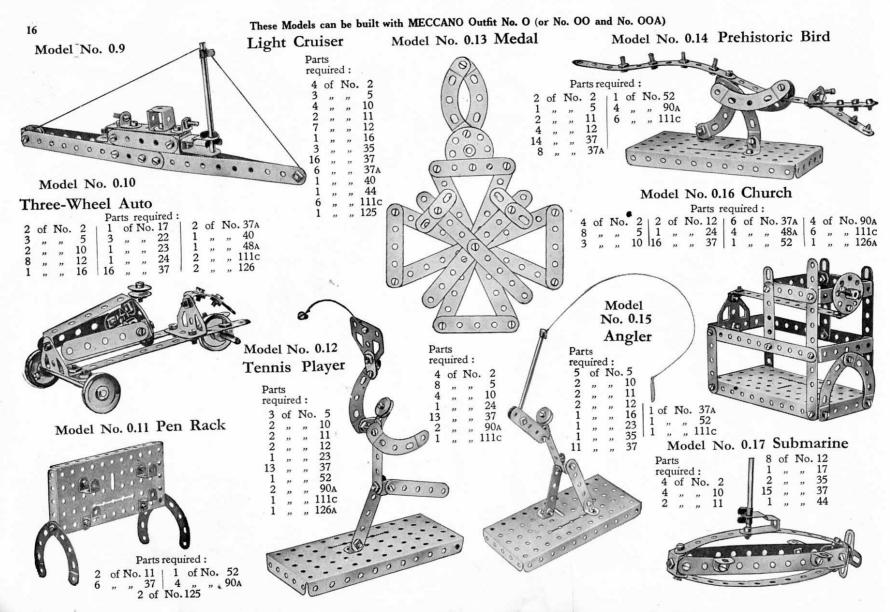


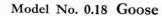
All these Models can be built with MECCANO Outfit No. 00 13 Model No. 00.170 Model No. 00.174 Model No. 00.172 Model No. 00.176 Level Crossing Model No. 00.178 Letter Balance Flower Pot Pullman Car Catapult Barrier Stand The pivoted arm is connected to the base by means of a short piece of elastic, which is not provided in the Outfit. 000000000 Model No. 00.173 Model No. 00.177 Ore Crusher 00000 Big Gun Model No. 00.171 Model No. 00.179 Well Driller Blacksmith The weighted 5½" Strips are pivoted by Bolts and lock-Nuts to the vertical members, and a 2½"×½" Double Angle Strip connects their upper ends. This Double Angle Strip is connected, in turn, to the vertical 3½" Axle Rod by means of a 2½" Strip and an Angle Bracket. Model No. 00.175 Joy Wheel @= !!

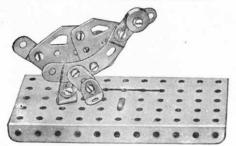
HOW TO CONTINUE

This completes our examples of models that may be made with MECCANO Outfit No. OO. 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. OOA Accessory Outfit, the price of which may be obtained from any Meccano dealer.







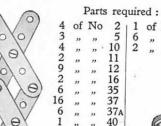


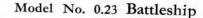
Par	-		
req	uire	ed:	
4	of	No.	10
2			12

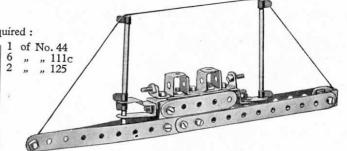
4	of	No	. 10
2	,,	,,	12
1	,,	,,	23
8	,,	,,	37
1	,,,	,,	37A
1	,,,	,,	52
2	,,	"	90a
1	,,	,,	111c
2	,,	,,	126A

Model No. 0.22

Lazy Tongs



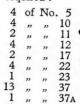




Model No. 0.19 Strong Man



Parts required:



0 0

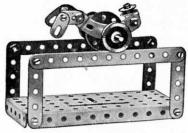
Model No. 0.20

Aeroplane

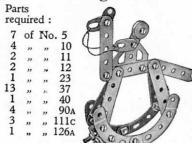
Parts required

8	Paris required:							
	4	of	No.	2	8	of	No	. 37
	3			5	1	,,		1110
	2	,,	22	12	2	,,	,,	125
	1	,,	,,	24	1	,,	,,	126

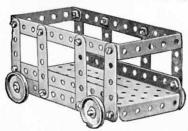
Model No. 0.24 Gymnast



Model No. 0.25 Rocking Horse



Model No. 0.21 Cattle Truck



Parts required:

4		· u ·	
4	of	No	
8	,,	,,	5
2	,,	,,	16
4	","	,,	22
16	,,	"	37
2	"	,,	37A
	,,	"	48A
1 2	"	"	52
4	"	"	111c

0

Parts required: 2 of No

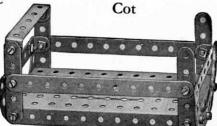
	of	No.	2
8	,,	"	5
13	"	"	37
9	"	"	37a

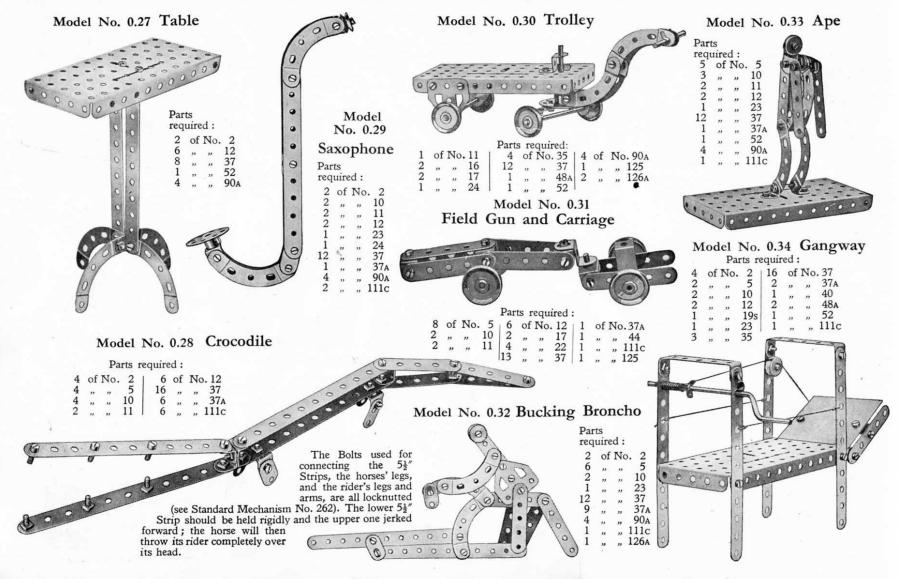
Parts required:

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

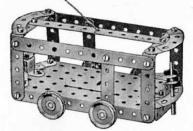
Parts required: 2 of No. 2





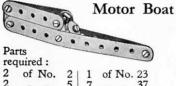


Model No. 0.35 Tramway Car



		Par	ts 1	requir	ed:		
3	of	No.	2	116	of	No.	37
6	,,	,,	5	6	,,	,,	37A
62224	,,	,,	10	2	,,	,,	48A
2	,,	,,	16	1	,,	,,	52
2	,,	,,	17	4	,,	,,	90a
4	,,	,,	22	6	,,	,,]	111c
6	,,	,,	35	2	,,	,,]	125

Model No. 0.36



	· (c)		Model No. 0.37 Arm Chair
"	11	î	" " 111c
"	5	7	" " 37 " " 37A

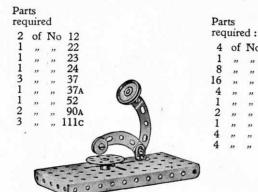


These Models can be built with MECCANO Outfit No. O (or No. OO and No. OOA)

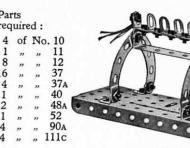
Model No. 0.38 Torpedo Boat

Parts required: Model No. 0.40

Gramophone

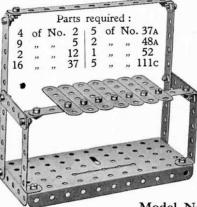


Model No. 0.43 Prehistoric Armadillo



Model No. 0.44 Motor Cycle and Side Car

Model No. 0.39 Piano



5	of	N		
3 2 4 2	,,	,,	10	
2	,,	,,	11	
4	"	"	12	
2	,,	,,	22 23	
1	,,	,,	23	
14	,,	,,	37	
1	"	,,	37A	
1	,,	,,	40	
1	,,	,,	52	1
1	,,	,,	90a	ı
1	,,	,,	111c	



Model No. 0.41

Milk Maid

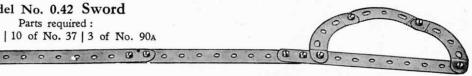


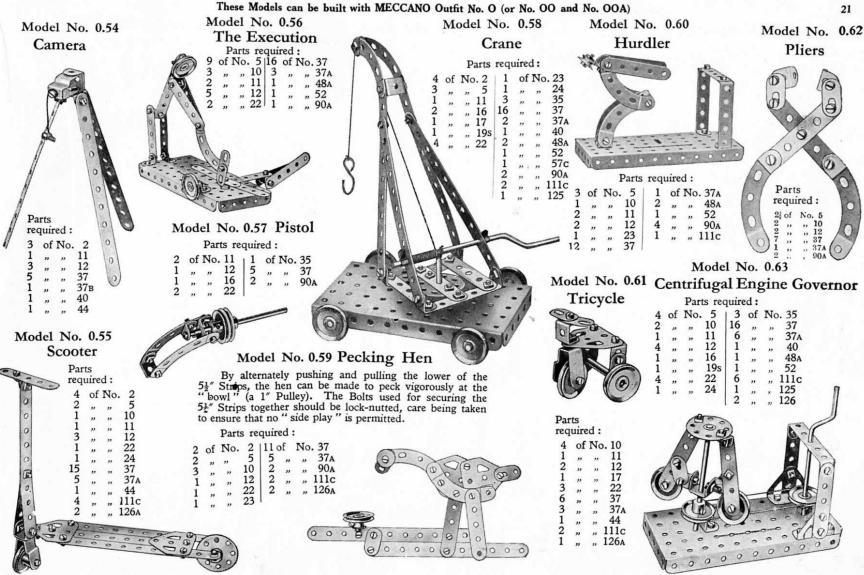
		Par	ts re	quire	ed:		
1	of	No.	5	10	of	No.	37
4	,,	,,	10	1	,,	,,,	37A
4 2 3	,,	,,	11	1	,,	,,	44
3	,,	,,	12	3	,,	,,	90a
1	,,	,,	16	1	,,	,,	111c
3	22	,,	22	1	,,,	,,,	125
1	,,	"	23	1	,,	,,,	126 _A

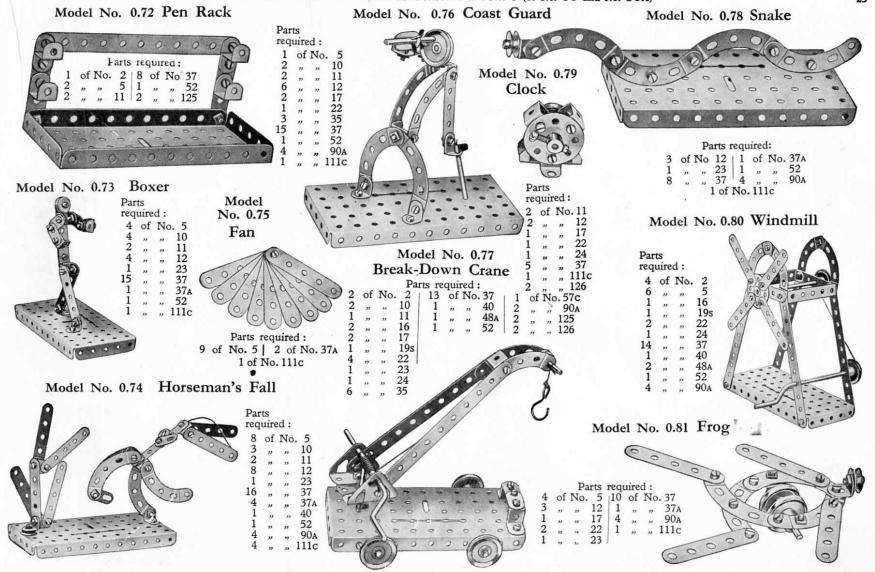
Model No. 0.42 Sword

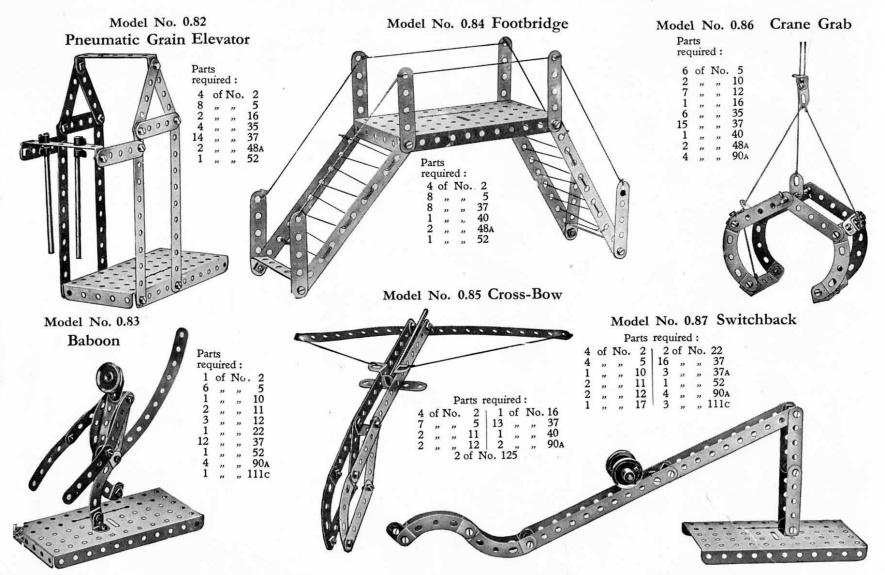
Parts required:

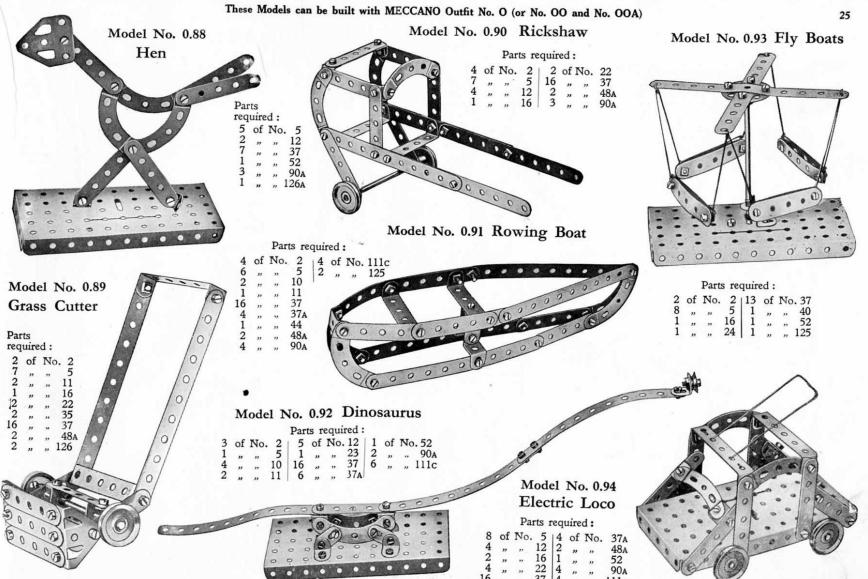
4 of No. 2 | 10 of No. 37 | 3 of No. 90A



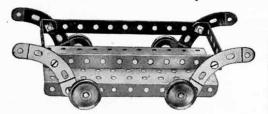








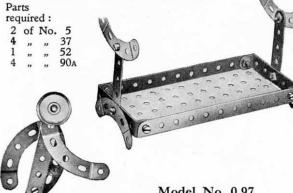
Model No. 0.95 Trolley



Parts required:

2	of	No.	2	8	of	No.	37
2	,,					,,	48A
4	,,	,,	22	1	,,	,,	52
		-	4 of	No	0.9	0a	

Model No. 0.96 Pen Rack

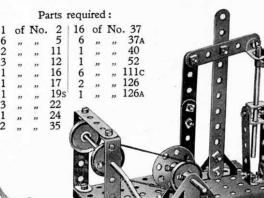


Model No. 0.97 Walking Man

Parts required: 5 of No. 5

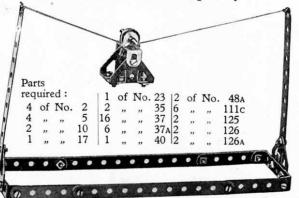
3	,,	,,	10
2	,,	,,	12
1	,,	,,	22
7	,,	,,	37
3	,,	,,	90

Model No. 0.98 Pump

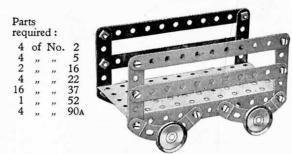


The connecting Strip is pivoted by Bolts and Nuts at one end to the Bush Wheel and at the other end to the cross beam. The latter is pivoted by the same means to the upright.

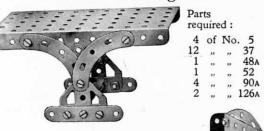
Model No. 0.99 Aerial Ropeway



Model No. 0.100 Luggage Truck



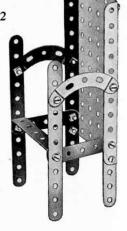
Model No. 0.101 Drafting Table

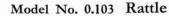


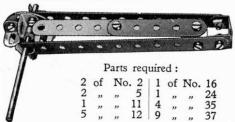
Model No. 0.102 Arm Chair

200	uire	d .	
req	une	a:	
2	of	No.	2
4	,,	,,	5
12	,,	,,	37
1	,,	,,	484
1	,,	,,	52
3	,,	,,	904

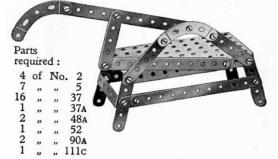
Darts







Model No. 0.104 Shearing Machine



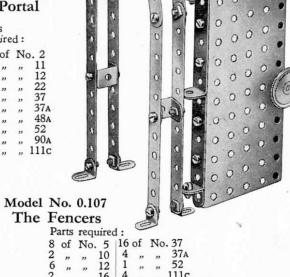
Model No. 0.105 Anchor



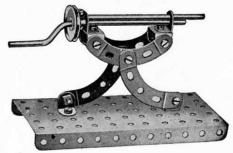
Model No. 0.106

Portal Parts required: 4 of No. 2

8 of No. 5 | 16 of No. 37



Model No. 0.108 Machine Gun



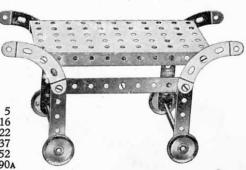
		P	arts r	equir	ed:		
2	of	No.				No.	22
4		,,	12	12	,,	,,	37
1			16	1	,,	,,	52
1	**	**	199	4	-	350	904

Model No. 0.109 Single Sheave Pulley Block

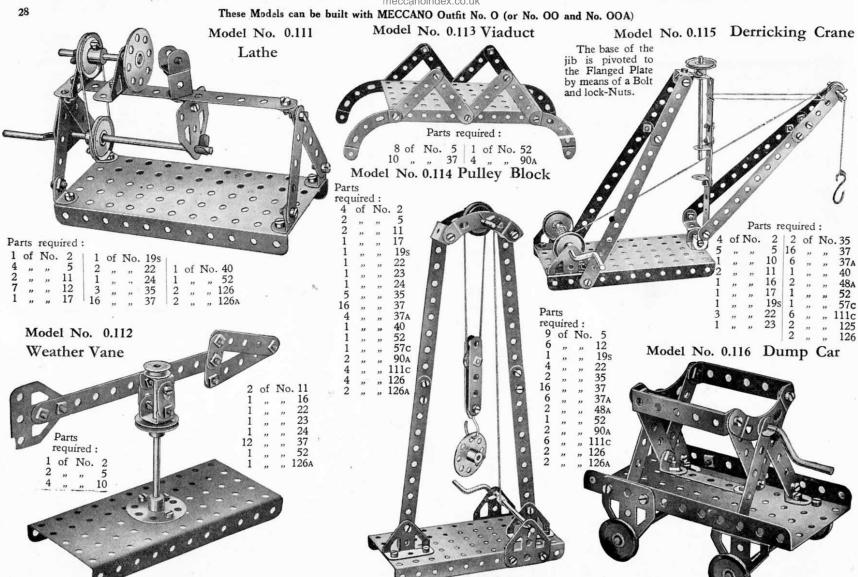


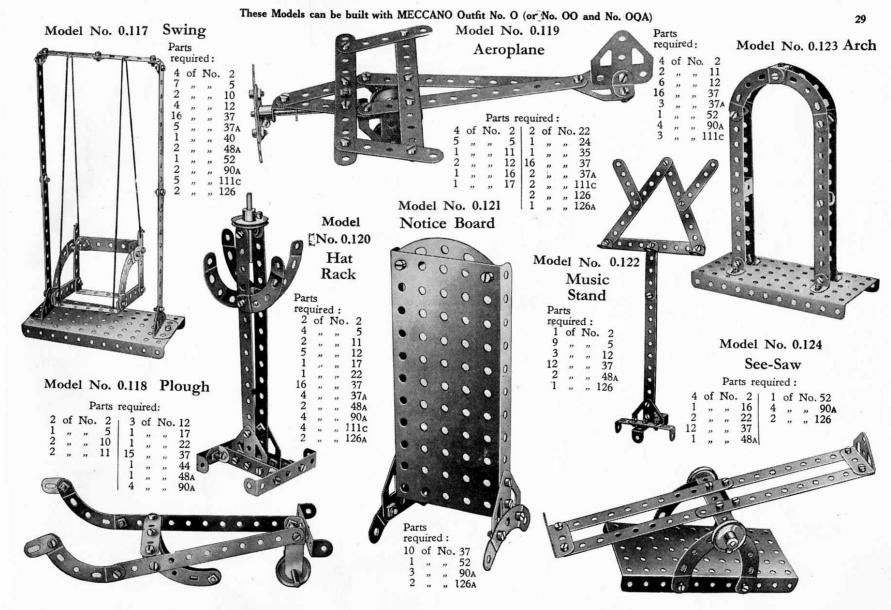
Parts required:
2 of No. 5 | 7 of No. 37A
1 ,, 23 | 1 ,, 57c
3 of No. 111c

Model No. 0.110 Tea Wagon

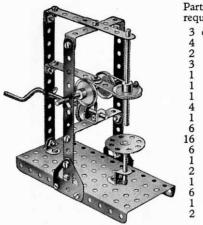








Model No. 0.125 Drilling Machine

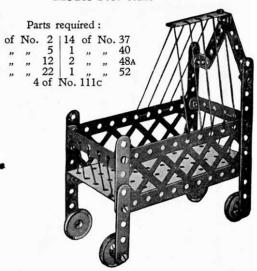


3	of	No	
4	,,	,,	5
2	,,	"	11
3	,,,	"	12
1	,,	"	16
1	,,,	"	17
1	"	"	19s
4	"	"	22
1	,,	"	24
6	"	"	35
6	"	"	37
6	"	"	37A
1 2	"	"	40 48A
1	,,,	"	52
_	"	"	111c
6	"	"	125
1 2	"	"	126
2	"	,,,	120

Model No. 0.127 Scales

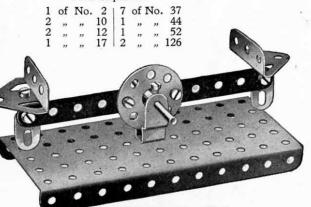


Model No. 0.129 Cot



Model No. 0.126 Counter Scales

Parts required:



Parts required:

2	of	No.	2	2	of	No.	48A
9	,,	,,	2 37 37 _A 40	1	,,	,,	52
1	,,	,,	37A	4	,,	,,	90a
1	,,	,,	40	1	,,	,,	126

Model No. 0.128 Single Sheave Pulley Block

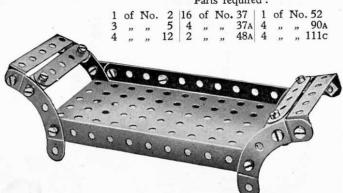


Parts required:

-	OI	110.	23
12	,,	,,	37A
1	,,	,,	57c
4	,,	,,	111c
2			126A

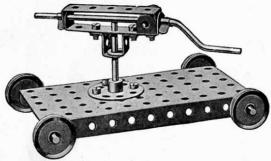
Model No. 0.130 Couch

Parts required:



Model No. 0.133 Prancing Horse

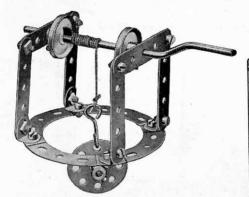
Model No. 0.131 Rock Drill



Parts required:

1	of	No.	11	4	of	No	. 22	12	of	No	52 125
2	,,	,,	16	1	,,	,,	24	1	,,	,,	52
1	,,	,,	17	2	,,	,,	35	2	,,	,,	125
1		24	195	5	1.000	- Seal or	37				

Model No. 0.132 Well Windlass



Parts required:

6	of	No.	5 12 19s	2	of	No.	22	1	of.	No.	. 40
4	,,	**	12	1	,,	"	24	1	,,	,,	57c
1	"	"	19s l	12	,,	,,	37	14	,,	,,	90A

Parts required: 6 of No. 5 4 " " 12 1 " " 17 1 " " 19s 4 " " 22 1 " " 24 16 " " 37 4 " " 37 4 " " 37 1 " " 40 1 " " 44 1 " " 52 1 " " 90 4 " " 111c 2 " " 125 1 " " 126 1 " " 126 1 " " 126

The Strip 1 forming part of the body is free to move about the Bolt 2, but two Nuts on the latter secure the rear legs and tail rigidly together. The arrangement of the various Strips about this Bolt 2 is shown more clearly in 0.133A. The Strip 3 is free to move at each end about pivots formed from Nuts and Bolts.

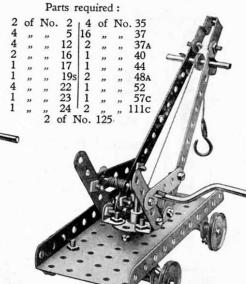


Parts required:

4 of No. 2 | 10 of No. 37 | 2 of No. 126

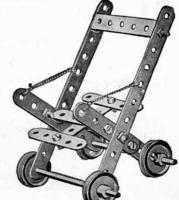
8 , , , 5 | 1 , , , 40 |

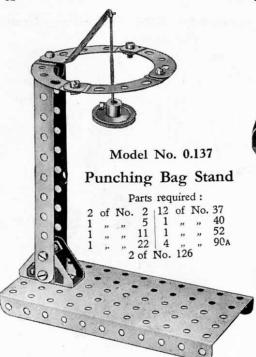
Model No. 0.135 Swivelling Crane

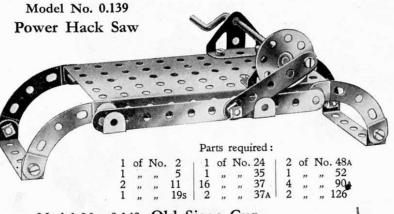


Model No. 0.136 Go Chair

Parts required:
2 of No. 2
7 " " 5
2 " " 16
4 " " 22
11 " " 37
1 " " 40
2 " " 48A

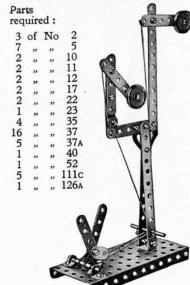








Model No. 0.141 Junction Signal



Model No. 0.142 Battleship

Model No. 0.138 Sled

Parts required:

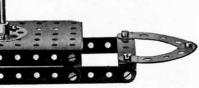
6 of No. 37 | 1 of No. 52 1 , , 48A | 4 , , 90A

	3	of	No.	2	1	of	No.	24
	1	,,	,,	11	16	,,	"	37
	4	"	,,	12	2	,,	,,	37A
1	1	,,,	,,	15	2	"	,,	48A
	2	,,	,,	16	1	,,	,,	52
	4	"	"	22	4	22	22	90a
			2	of	No. 1	110	C	

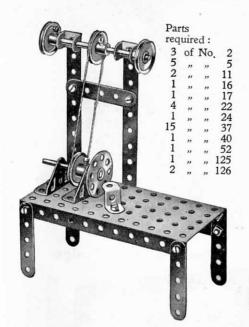
Parts required:

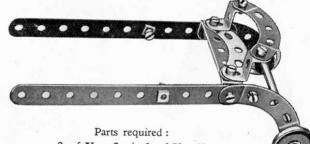


4	of	No.	2	1	1	of	No	. 35
2	,,	,,	5		16	,,	,,	37
4	,,	,,	10		6	,,	,,	37a
1	,,	,,	11		2	,,	,,	48a
1	,,	,,	16		1	,,	,,	52
1	,,	,,	17		2	,,	"	90a
3	,,	,,	22		6	,,	,,	111c
1	,,	,,	24	- 1	1	,,	,,	125
		2	of	No	. 12	6		

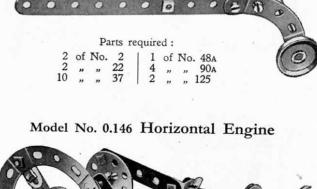


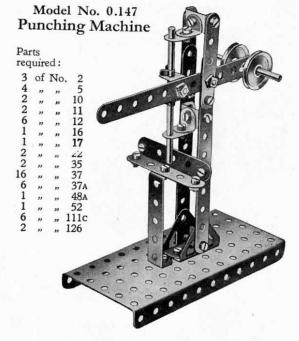






Model No. 0.145 Sulkey





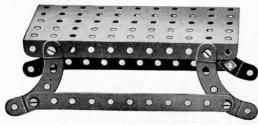
Model No. 0:148 Bath Chair

Parts required:

4 2 2 4	of	No.	5	16	of	No.	37
2	"	"	12	2	"	"	48A
2	,,	"	16 22	1	,,	"	52
4	"		22	No.	,,	,,	90a
							A
							M.

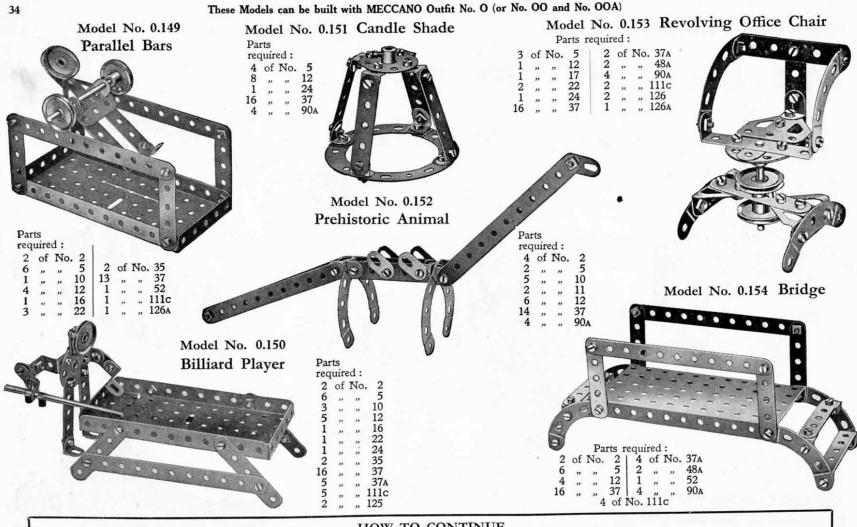
Model No. 0.144 Bench Parts required:

2 of No. 2 | 1 of No. 52 8 " " 37 | 4 " " 90A



Parts required:

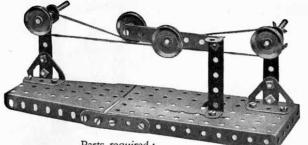
2	of	No.	2	4	of	No.	22				
6	,,		5		,,	,,	24	1 1	of	No. 52	
2	,,	,,	10	3	,,	"	35	4	,,	" 90 _A	
1	,,	,,,	12	16		**	37	5	,,	" 111c	
2	,,	,,	16	5		,,	37A		,,		
1	"	,,	19s	1	"	,,,	40	2	,,	" 126A	



HOW TO CONTINUE

This completes our examples of models that may be made with MECCANO Outfit No. O (or No. OO and No. OOA). The next models are a little more advanced, requiring extra parts to construct them. The necessary parts are all contained in a No. OA Accessory Outfit, the price of which may be obtained from any Meccano dealer.

Model No. 1.1 Jockey Pulley

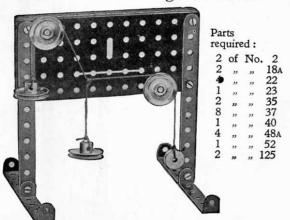


Parts required:

1	of	No.	3	12	of	No	. 35	1	of	No.	52
4	,,	,,,	5	20	,,	,,	37	1	,,	,,	54 111c 126
2	,,	,,	17	1	,,	,,	37A	2	,,	,,	111c
4	,,	,,	22	1	,,	"	40	2	,,	,,	126
				1	,,	,,	48A				

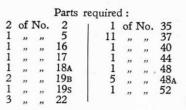
The weight of the pivoted $3\frac{1}{2}''$ Strip, augmented by the 1" fast Pulley Wheel, causes the jockey pulley to press on the belt. Hence the latter is kept always taut.

Model No. 1.2 Triangle of Forces

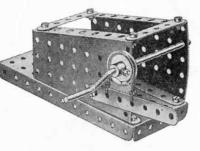


The suspended weights represent three forces acting on a centra point. If a triangle is drawn with its sides respectively parallel to the three converging cords, i.e., parallel to the directions of the three forces, the lengths of the sides will be found to be proportional to the respective magnitudes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

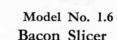
Model No. 1.5 Belt Gear Right-angle Drive Transmission



Model No. 1.3 Band Brake



Parts required:



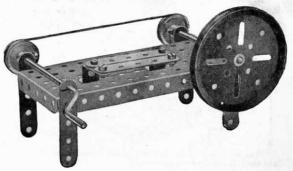
Parts required: 6 of No. 5 | 1 of No. 35



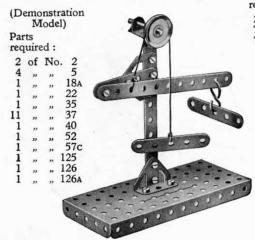
Model No. 1.4 "H" Girder

required: 6 of No. 2

Parts



Model No. 1.7 Lever of the Second Order



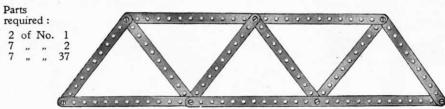
The fulcrum is at one end, the load at the other and the power lies between the two.

Model No. 1.8 Lever of the Third Order (Demonstration Model) Parts required: Model 1 45° Set-

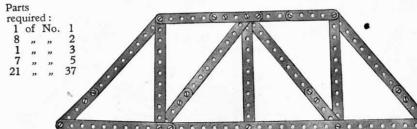
The fulcrum is at one end, the power at the other and the load lies between the two.

These Models can be built with MECCANO Outfit No. 1 (or No. O and No. OA)

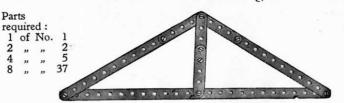
Model No. 1.9 Compound Triangulated Truss



Model No. 1.10 Howe Truss



Model No. 1.11 Triangulated Truss



No. 1.12 -Square	Model No. 1.13
-square	Set-Square
60006090	Parts required:
Parts rec	quired: 2 of No. 1 " "

5 of No. 37

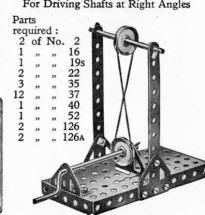
	Parts required:								
2	of	No.	2	10	of	No.	37		
1	,,	,,	16	1	,,	,,	40		
1	,,	"	19s	1	,,	"	48A		
2	,,,	,,	22	1	,,	,,	52		
4	,,	,,	35	2	,,	,,	126 _A		

Model No. 1.14 Belt Gear

For Reversing Motion of Driven Shaft

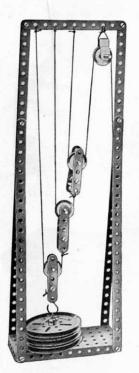
Model No. 1.15 Belt Gear

For Driving Shafts at Right Angles



Model No. 1.16 Pulley Block

Demonstration Model:
1 Fixed and 3 Movable Sheaves.
Theoretical Mechanical advantage: 8 to 1



Parts required:

4	of	No	0. 1	3	of	No.	19 _B	
3	,,	,,	2	4	,,	,,	22	
6	,,	,,	5	15			37	
2 2 2	,,	,,	11	1	,,	**	40	
2	,,	,,	12	1		"	44	
2			17	1			52	
2			18 _A	1			57c	

Model No. 1.17

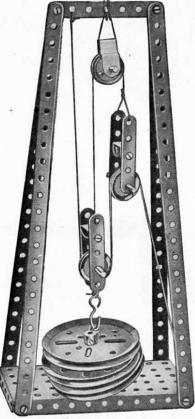
Pulley Block
Demonstration Model:
3 Fixed and 2 Movable Sheaves.
Theoretical Mechanical advantage: 5 to 1

4	of	No.	1	1 4	of	No.	19 _B
7622222	,,	,,	2	4	,,	,,	22
6	,,	,,	5	6	,,	,,	35
2	,,	"	10	22	,,	,,	37
2	,,	,,	12	1	,,	"	40
2	,,,	,,	16	1	,,	,,	44
2	,,	,,	17	1	,,	,,	52
2	,,	"	18a	1	,,	,,,	57c
		2	of I	No. 12	26A		



Model No. 1.18 Pulley Block

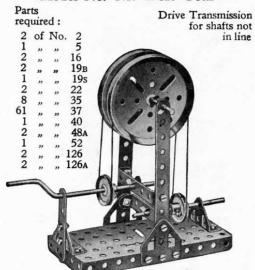
Demonstration Model:
JFixed Sheave and 2 Suspended Blocks.
Theoretical Mechanical advantage: 4 to 1



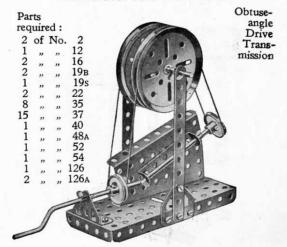
Parts required:

4	of	No.	1	1 4	of	No.	19B
1	"	,,	3	3	,,	,,	22
4	,,	,,	- 5	10	,,	,,	37
2	,,	,,	11	1	,,	,,	40
1	"	22	17	1	"	,,	44
2	,,	,,	18A	1	,,,	,,	52
			of I	No. 5	7c		

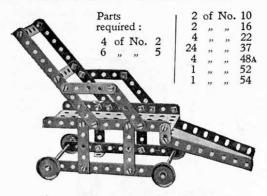
Model No. 1.19 Belt Gear



Model No. 1.20 Belt Gear



Model No. 1.21 Invalid Chair



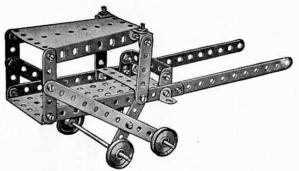
Model No. 1.22 Letter Balance

Parts required:

6	of	No.	2	4	of	No.	22	1 2	of	No	. 48A
3	,,	,,	5	1	,,	,,	24	1	,,	,,	52
1	,,	**	10	26	,,	,,	37	2	,,		111c
1	,,	,,	12	4	,,	,,	37a		,,		126
2	,,	,,	18 _A	2	,,	,,	38	2	,,	,,	126A
1			19R	1			44				

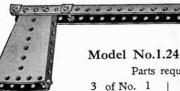


Model No. 1.23 Ticca Gharry



Parts required:

4	of	No.	2	6 2 4	of	No.	12	1	22	of	No.	37
6	,,	,,	5	2	,,	,,	16	1	1	,,	,,	52
2	,,	,,	10	4	,,	,,	22		1	,,	"	54



Model No.1.24 Hatchet

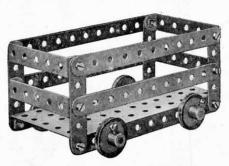
Parts required:

3	of No.	1	15 of	No.	. 37
6	,, ,,	12	2 "	,,	24

Model No. 1.25 Truck with Sides

Parts required:

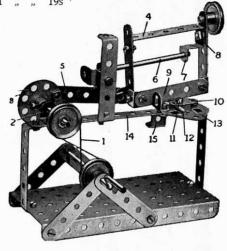




Model No. 1.26 Mechanical Saw

Parts required:

1	of	No.	2	3	of	No.	22	1 1	of	No. 4	4
8	,,	**	5	1	,,	22	24	4	,,		8a
1	"	"	10	3	,,	,,	35	1	,,	" 5	200
1	,,	,,	-11	22	,,	,,	37	2	,,	" 12	
4	,,	,,,	12	4	,,	,,,	38	1	,,	,, 12	6а
1	,,	"	16	1	,,	**	40	1			
1	,,,	,,	17								
1		**	19s	5						-	

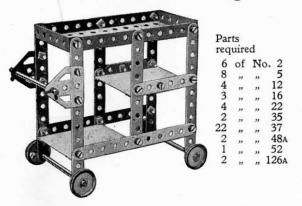


The Strip 9 represents the saw. The Crank Handle drives, through a belt 1, a short Rod journalled in a Double drives, through a belt 1, a short Rod journalled in a Double Bracket 2 and carrying a Bush Wheel 3. The latter imparts a reciprocating motion to the saw frame 4 through a 2½ Strip 5 loosely mounted on Bolts secured to the Bush Wheel and to an Angle Bracket bolted to the saw frame. This frame slides on a 3½ Rod 6, which acts as a guide, passing through the frame and supported in a Reversed Angle Bracket 7. A Washer is placed on the Bolt 8 behind the Bracket 7. A vice to secure the objects in position for cutting consists of a Flat Bracket 10 mounted on a Bolt 11, a few turns of which causes the Elst Bracket to grin the object 12. The of a Flat Bracket 10 mounted on a Boit 11, a few turns or which causes the Flat Bracket to grip the object 12. The Boit 11 enters a Nut held between the Flat Trunnion 13 and 5½" Strip 14, which are spaced apart for the purpose by Washer placed on the two Boits holding the Trunnion in position. The saw frame rests on the stop 15 when not in use. A 1" Pulley secured to the top of the frame acts as a weight and helps to steady the saw.

39

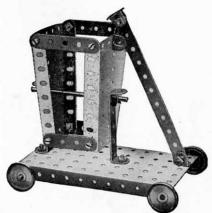
These Models can be built with MECCANO Outfit No. 1 (or No. O and No. OA)

Model No. 1.27 Dinner Wagon



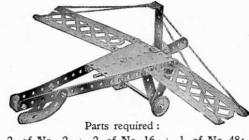
The two lower platforms are constructed out of pieces of ordinary cardboard, their outer edges resting on $2\frac{1}{2}$ Double Angle Strips and their inner edges on Angle Brackets.

Model No. 1.28 Tip Wagon



1	of	No.	
4	,,	,,	5
5	"	,,	12
3	,,	,,	16
4	"	"	22
2	,,	,,	35
14	,,	,,	37
2	,,	,,	48A
1	,,	,,	52
2	,,	,,	54

Model No. 1.29 Aeroplane



					-	1					
2	of	No.	2	1 2	of	No.	16	1	of	No	. 48A
5	,,	,,	5	2			22	1	,,	,,	54
1	,,	,,	11	1	,,	,,	24	2	"		90A
6	,,	,,	12	21	,,	,,,	37	2	"	"	100
				1 1	**	,,	40				

Model No. 1.30 Timber Drag

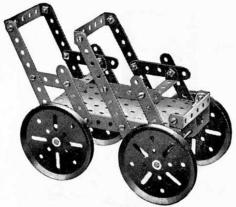


					Pa	rts	requ	neu						
4	of	No.	. 2	1	2	of	No.	16	1	8	of	No	. 37	
													48A	

Model No. 1.31 Lawn Mower

	:	ired	equi	rts r	Pa		
22	No.	1 of	4	5	No	of	4
37	,,	, ,	19	5	,,	,,	7
44	,,	۱,,	1	11 16 17	,,	,,	2
48 _A	,,	3 "	3	16	,,	"	2
				17	,,	,,	1
		_		1000			
		V		3		0	

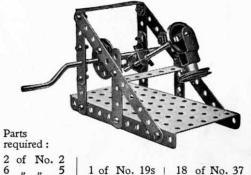
Model No. 1.32 Tandem Car



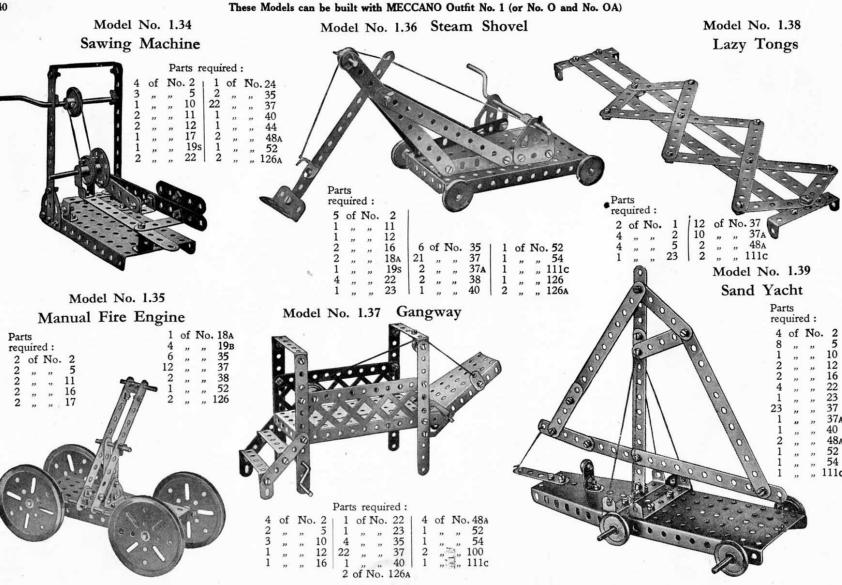
Parts required:

4	of	No.	2	26	of	No	. 37
8	,,	,,	5	5	,,	,,	48A
2	,,	,,	12	1	,,	,,	52
2	,,	,,	16	2	,,	,,	126A
4	**	**	19в				

Model No. 1.33 Mechanical Hammer



2	of	No	. 2	1							
6	,,	,,	5	1	of	No.	19s	1 18	8 of	No.	37
1	,,	,,	11	2	,,	,,	22		1 "	,,	44
1	,,	,,	12	1	,,	,,	24	1 3	3 "	,,	48
1	,,	,,	16	i 4	,,	,,	35	1	1 "	,,	52



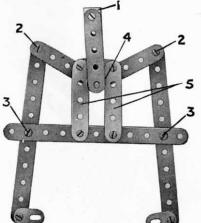
Model No. 1.40 Horseman



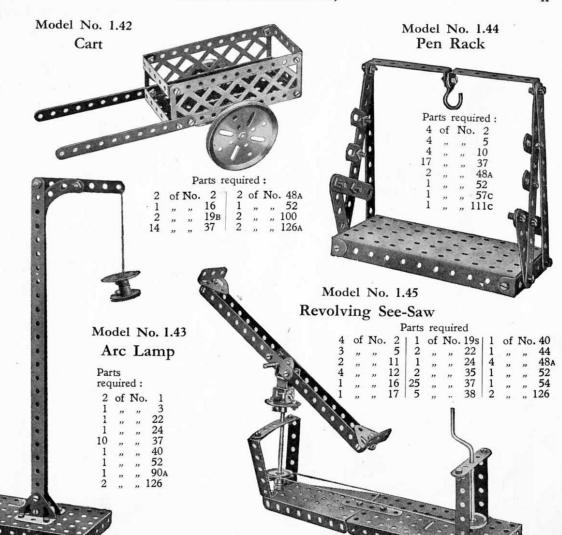
2	of	No	
7	,,	**	5
3	"	"	10
2	"	**	12
2	,,,	22	16
4	,,,	"	22
1	"	,,	24
17	,,	,,	37
1	"	"	52
1	,,	"	54
2	- >>	**	90a
1	,,	,,	126a

Model No. 1.41 Friction Grip Tongs

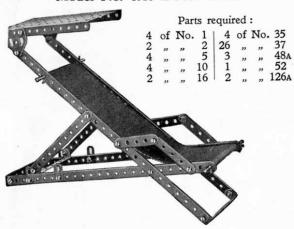
The hoisting cord is attached to the Double Bracket 1. The joints 2, 3 are lock-nutted, so that when the grip is raised the ½" loose Pulley Wheel 4 slides upward between the 2½" Strips 5, and the grip closes upon the block of wood or other material placed between its jaws.



3	of	No.	
8	,,	,,	5
4	,,	**	10
ı	,,	,,	11
ļ	,,,	"	23
2	"	"	35
2	,,,	"	37

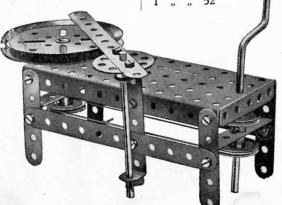


Model No. 1.46 Deck Chair

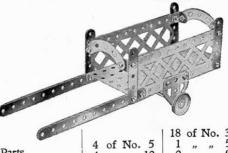


Model No. 1.47 Potter's Wheel

		Pa	rts re	quir	ed:		
3	of	No.		3	of	No.	22
4	,,	,,	5	1	,,	,,	24
1	,,	"	16	1	,,	"	35
1	,,	,,	18a	12	,,	,,	37
1	,,	,,	19 _B	1	,,	"	40
1	,,	,,	19s	3	"	"	48A
				1	"	"	52

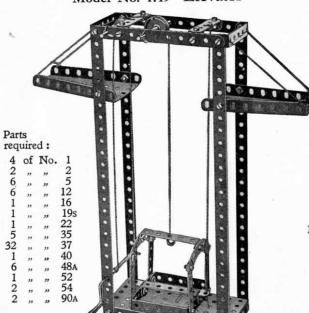


Model No. 1.48 Luggage Cart

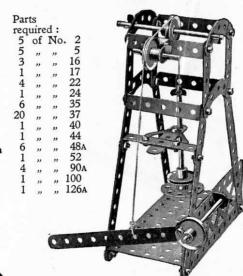


		(5.		1				10	OI .	TAO	. 31
				4	of	No.	5	1	,,	,,	52
	rts			4	,,	,,	12	2	,,	,,	90a
re	quire	ed:		1	,,	,,	16	2	,,	,,	100
2	of	No.	2	2	"	,,	22	2	,,	,,	126A

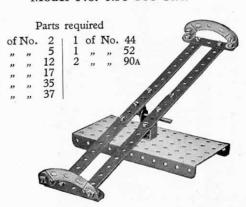
Model No. 1.49 Elevator



Model No. 1.50 Mechanical Stamp



Model No. 1.51 See-Saw





Model No. 1.52 Umpire's Seat

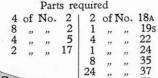
Parts required:
6 of No. 2
7 " 5
2 " 10
4 " 12
24 " 37
3 " 48A
2 " 906A

Fly Boats

Model No. 1.54

Model No. 1.53 Submarine

		Pa	IIIS .	requi	rea	•	
	of	No.	1	1 2	of :	No	. 35
52823	,,	,,,	10	28	,,	,,	37
2	,,	,,	11	3	,,	,,	37A
8	"	,,	12	2	,,	,,	38
2	,,	,,	17	1	,,	,,	48
3	,,	"	22	1	,,	,,	48A
1	,,	,,	24	2	,,	,,	125
				1 2			126



Trunnions are bolted to the side 12½" Strips, and a Bolt passed through their inner extremities secures a ½" Reversed Angle Bracket and an Angle Bracket. The former is attached to the upper 12½" Strip while the Angle Bracket is connected by means of a Flat Bracket and a further Angle Bracket to the lower Strip.

Model No. 1.56 Acrobat on See-Saw

Model No. 1.55

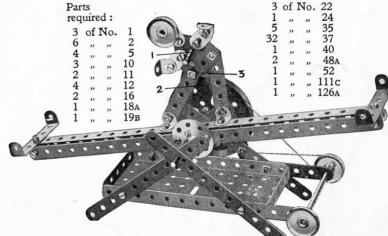
| 6 of No. 48A

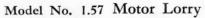
Parts required:

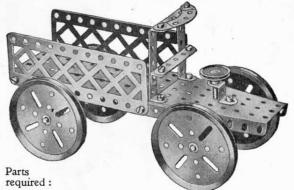
of No. 2

Bath Chair

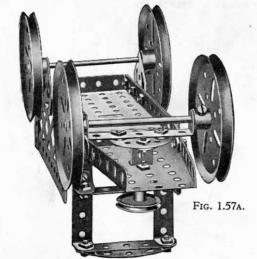
The 1" Rod 1 is journalled in the end holes of two $5\frac{1}{2}$ " Strips 2 and in the Flat Trunnion 3 which joins them. It is held in position by two Spring Clips, placed on either side of the $5\frac{1}{2}$ " Strips 2.



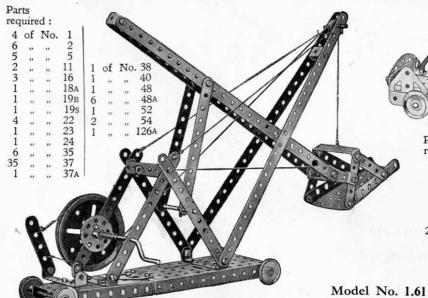




									-	
2	of	No.	2	1						
2	,,	,,	5							
2	,,	,,	12	25	of	No.				
2	,,	,,	16	2	,,,	"	38	1	of	No. 90A
1	,,	,,	18A	3	,,	,,	48A	2	,,	" 100
4	,,	,,	19B	1	"	"	52	2	,,	,, 125
1	,,	"	24	1	,,	,,	54	2	,,	" 126A



Model No. 1.58 Mechanical Shovel

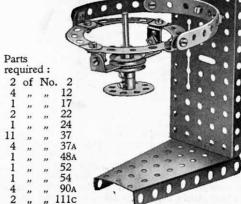


Model No. 1.59 Battleship

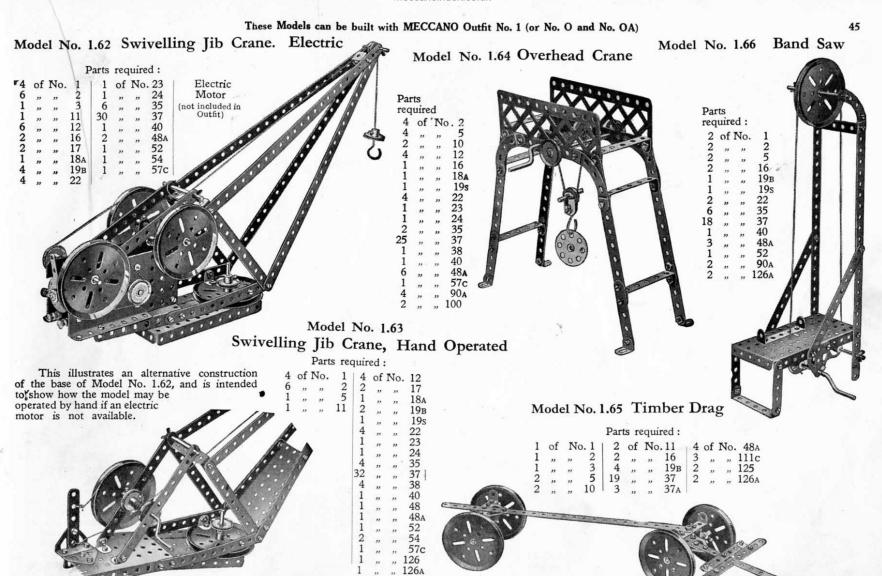
			Parts requ				
5 2	f No.	1 2 10 11 12	2 of No 26 ,, ,, 6 ,, ,	22 37 37 _A	1 of 2 " 6 "	No. 40 ,, 48a ,, 111c ,, 125	
		//			0		
					30	33.70	9

Model No. 1.60 Locomotive

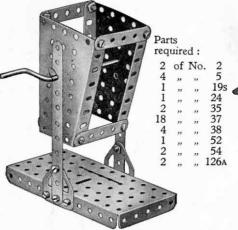
Par	rts	ed:	
7	of	No	
1		,,	11
1 6 2 4	,,	,,	12
2	,,	,,	16
4	,,	**	22
1	,,	,,	24
24 4	,,	,,	22 24 37 48A
4	,,	,,	48A
1	,,	,,	52
1 1 2	,,		90a
2	,,		126



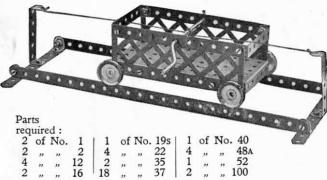
Ship's Lamp



Model No. 1.67 Butter Churn



Model No. 1.69 Cable Railway

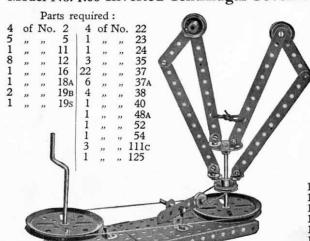


Model No. 1.70 Candle Stick





Model No. 1.68 Inverted Centrifugal Governor



Model No. 1.71 Machine for Tracing a Locus

Parts required:

1 of No. 2 | 4 of No. 35

1 " " 5 | 4 " " 37

1 " " 11 | 3 " " 37A

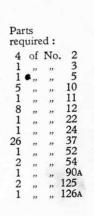
1 " " 12 | 4 " " 38

1 " " 17 | 4 " " 54

1 " " 18A | 2 " " 111c

1 " " 24 | 1 " " 125

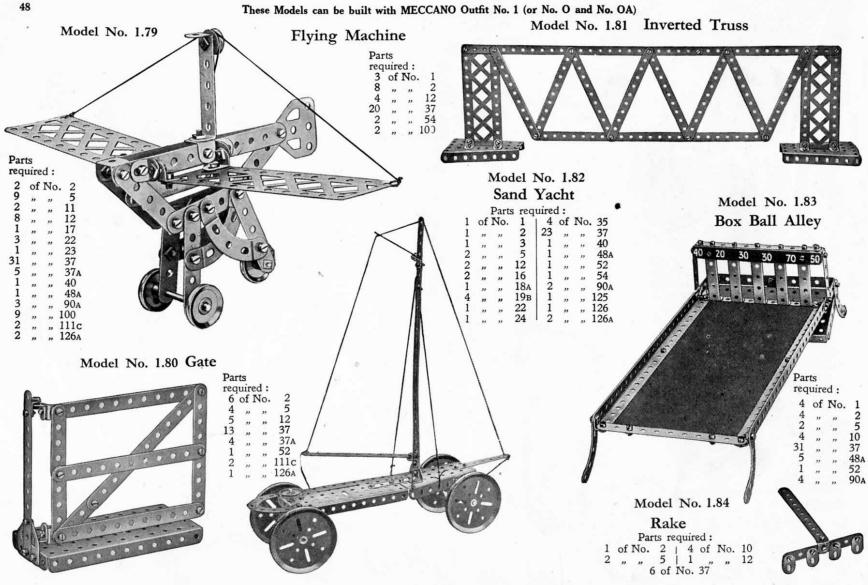
Model No. 1.72 Man and Boy



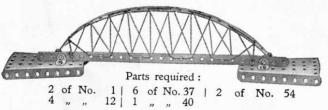
The $5\frac{1}{2}$ " Strip is pivoted to the $2\frac{1}{2}$ " Strip by means of a Bolt and two Nuts, and the $2\frac{1}{2}$ " Strip is similarly pivoted to the Sector Plate. By revolving the $2\frac{1}{2}$ " Strip about its pivot, the vertical $1\frac{1}{2}$ " Rod can be made to trace a locus. If the positions of the $1\frac{1}{2}$ " Rod and

the 5½" Strip are altered, several different loci may be traced. Machines of this type are of advantage in assisting in the design of engine connecting rods.

Model No. 1.73 Windlass Model No. 1.75 Model No. 1.76 Aeroplane Signal Parts required: Parts 4 of No. required: 6 of No. 19s Parts required: 2 of No. Model No. 1.77 Truck The figure at the right of the model is arranged to work Parts to and fro when the Crank Handle is rotated. The Bolts required 1 and 2 are both secured by two Nuts as in Standard 2 of No. 16 Mechanism No. 262. Model No. 1.74 Lorry Crane Parts required: Model No. 1.78 Mountain Transport Parts required: 2 of No. 11 | 1 of No. 40

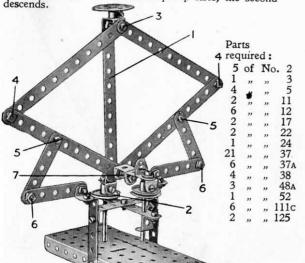


Model No. 1.85 Bow Girder

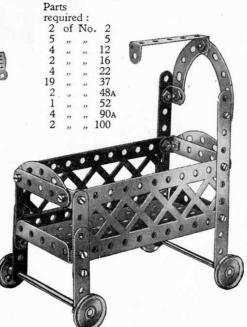


Model No. 1.86 Double-Action Pump

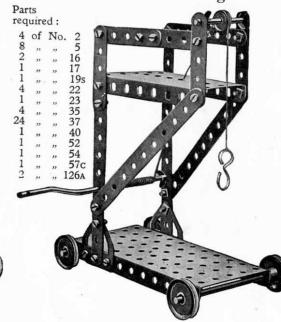
The 5½" Strip 1 is attached to the 1" Pulley Wheel 2 by means of two Angle Brackets, through the lower of which passes the Set-Screw that secures the Pulley to its 2" Rod. Two Washers are placed beneath the head of the Bolt joining the Angle Brackets in order to prevent its shank from binding on the boss of the Pulley 2. The joints 3, 4, 5, 6, 7, are all lock-nutted, the remainder of the joints being quite rigid. When the Strip 1 descends, together with the first pump, the incidental distortion of the parallelogram 3, 4, 7, 4 causes the second pump to rise. Similarly, when the first pump rises, the second descends.



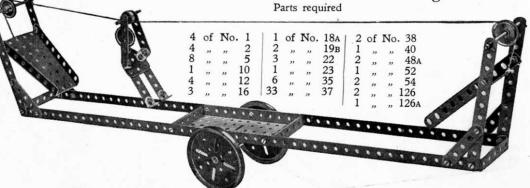
Model No. 1.87 Cot on Wheels



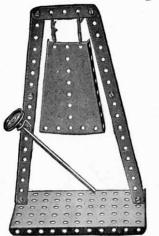
Model No. 1.88 Tower Wagon



Model No. 1.89 Aerial Flight



Model No. 1.90 Gong



4	of	No.	1	3	of	No.	22
4	,,	,,	2	1	,,	,,	24
6	,,	,,		6	,,	"	35
6 4 2 1 1	,,	,,	10	22	,,	,,,	37
2	,,	,,	16	1	,,	,,	40
1	,,	,,	17	4	,,	,,	484
1	,,	,,	19s	1	,,	,,	52
				2	,,	"	54

Parts required:

Model No. 1.92 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 Handle is taken to a 1" Pulley, fast on the vertical 2" Rod, another similar Pulley being secured to this Rod beneath the Plate.

The arms are formed of four $5\frac{1}{2}$ " Strips bolted to a Bush Wheel fast on the 2" Rod.



Model No. 1.94 Travelling Crane

				P	arts	requ	uired				
2	of	No.	1	1	of	No.	24	2	of	No	. 90
6	,,	,,	2	4	,,	,,	35	2	,,	,,	111
1	,,	,,,	11	25	,,	,,	37	1	,,	,,	125
6131214	,,	,,	16	6	,,	,,	37A	2	,,	,,	126
1	,,	,,	18A	1	"	,,	40	2	,,	,,	126
2	,,	,,	19 _B	1	,,	,,	48				
1	,,	,,	19s	4	,,	,,	48A				,
4	"	"	22	1	,,	,,	52				//
1	,,	,,	23	1	,,	,,	57c			/	/
						"			/	/	- 4
								/	1		- 40

Parts required:

4	of	No.	2	1	of	No.	22
1	,,	,,	5	9	,,	"	37
3	"	,,	12	1	"	,,	40
1	,,		16	1	_"	,,,	52
		1	OI	No.	54		

Model No. 1.91 Emery Wheel

				Pa	rts	requ	ired	:			
1	of	No.	17	1	of	No.	24	1	of	No.	48A
1	,,	,,	18A				35	1	,,	,,	52
2	,,	,,	19 _B	10	,,	,,	37	1	,,	,,	111c
1	,,	,,	22	1	,,	,,	40	2	,,	,,	125
								2	,,	,,	126A

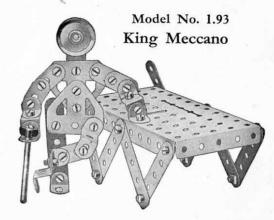


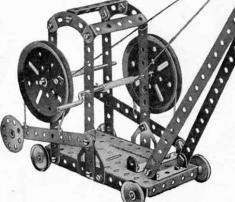


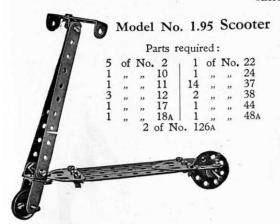


Parts required:

1	of	No.	3	1	of	No	. 35
9	,,	,,	5	30	,,	,,	37
5	,,,	,,	10	1	"	,,	52
8	"	"	12	1	,,	"	111c
1	,,,	"	17	2	,,	"	125 126a
1	,,	,,,	22	- 4	"	"	120A







Model No. 1.96 Ballista

This is a model of an ancient engine of war, resembling the crossbow. The 3½" Strip 1 is bolted firmly to the Double Angle Strip 2, which is prevented from turning by the addition of Angle Brackets as shown. A Double Bracket 3 slides on the Strip 1 and is secured to

a piece of cord. On rotation of the Crank Handle 4, the Strip 1 is pulled backward until the Double Bracket 3 slips off its end. The Strip then flies forward and strikes the missile, which consists of a 2" Rod placed ready in the Double Bracket 5.

Parts required:

4	of	No.	. 1	1	of	No.	18A	1	of	No.	44
4	,,	**	2	3	,,	,,	19B	4	,,	,,	48A
	,,	,,	3	1	,,	,,	19s	1	,,	,,	52
2	,,	,,	11	4	,,	,,	22	1	,,	"	90a
2	,,	,,	12	21	,,	,,	37	2	,,	,, 1	29a
2			16	1			10				

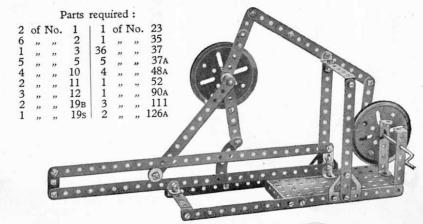
Model No. 1.97 Tight-Rope Walker

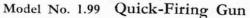
	The cord on which the "Meccanitian" runs is endless and passes over the 1" fast Pulleys at each end of the model.
	One of the Pulleys is secured to a Crank Handle, by means of which the model may be operated. The Meccanitian runs on the upper half
2	of the endless cord, the lower half being attached to one of his feet.

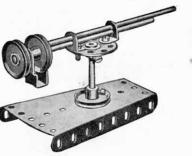
Parts	
required	:

		-									Contract of the last
4	of	No.	1	2	of	No	. 17	r			. 0
4	,,	,,,	2	1	,,	,,	19s				2.5
1	,,	,,	3	4	,,	"	22	1	of	No.	
5	,,	,,	5	1	,,	,,	23	2	,,	,,	48A
3	,,	,,	10	6	,,	,,	35	1	,,,	25	52
4	,,	,,	12	34	,,	,,	37	2	"	,,	54
2		1000	16	2			38	1			126A

Model No. 1.98 Double-Action Piston Connection



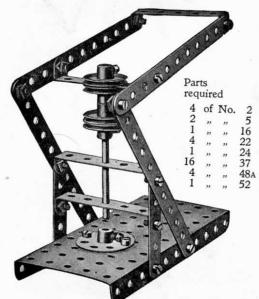




Parts required:

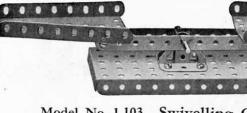
	of	No.	12	1	of	No.	24
2	,,	"	16	2	,,	,,	37
1	,,	**	17	1	,,,	,,	44
4	,,	,,	22	1	,,	,,	54

Model No. 1.100 Punching Machine



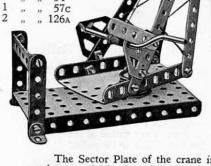
Model No. 1.101 Scales

2	of	No	. 2
2	"	**	11
	,,	22	18a
2	,,	,,	35
	,,	,,	37
	,,	"	52
	,,	,,	54
	,,	,,	126



Model No. 1.103 Swivelling Crane Parts required:

		Pal	is re	qui	rea	:	
4	of	No.	5	1	of	No	0. 25
4 7 2 2 1 4 1 2 21 3	,,	23	5	1	,,	,,	54
2	,,	,,	12	1	,,	,,	570
2	**	**	17	2	,,	,,	1264
1	,,,	,,	19s		_		
4	**	,,	22		1		
1	22	,,	23		Øλ.		
2	,,	**	22 23 35		V	0	-
21	,,	,,	37				0
3	,,	,,	38			•	6
1	,,	,,	40	Se :			1
1	,,,	,,	44	•	15		35.3
1	,,	,,,	48A		V	•	
1					1	3	•



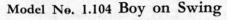
Model No. 1.102 Extended Ash Tip

							mrr c c				
	of	No.		2	of	No.	18a	2	of	No	. 48
5	"	"	2	1	,,	,,	19s	1	,,	,,	52
7,	"	"	5	4	,,	,,	22	6	"	"	1110
2	"	**	11 12	1	**	"	24	2	,,	"	125
1	"	"	16	36	**	"	35 37	2	"		126
2	"	"	17	1	**	"	40	2	"	"	126
_	"	33			**	**	10				

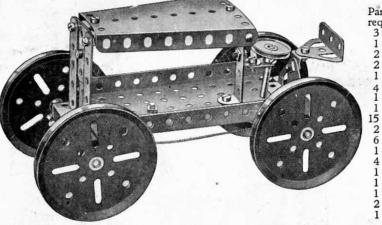
Parts required .

The trolley is operated by means of a cord that is wound round the $1\frac{1}{2}$ " Axle Rod carrying the Bush Wheel, both ends of the cord being secured to the trolley. The bucket is suspended from a cord that winds on to the Crank Handle, and it is tipped by lowering it until a short cord that is attached to the bottom of the bucket and to the trolley, becomes taut. Further lowering causes the bucket to swing over.

The Sector Plate of the crane in the above model is pivoted to the base with a fast Pulley above and below.



Parts required : of No. 1 | 1 of No. 17 | 1 of No. 48A " " 2 | 4 " " 22 | 1 " " 52 " " 5 | 1 " " 24 | 1 " " 54 " " 10 | 7 " " 35 | 2 " " 125



Model No. 1.105 Motor Tractor

05	_	110	tor I
Par	rts		
rec	uir	ed:	
3		No	
2 2	,,	,,	10
2	"	"	12
2	,,	,,	16
. 1	"	"	18 _A
4	"	, ,,	19в
1	"	,,	22
1	,,	"	24
15	"	"	37
6	"	"	37A
6	,,,	"	38
1	"	"	40
4	22	"	48A
1	"	"	52
1	"	"	54
1	,,,	"	111c
2	"	"	126
1	, ,,	"	126A

Fig. 1.105a

The steering gear is shown in Fig. 1.105a. The front wheels are carried in a $2\frac{1}{2}'' \times \frac{1}{2}''$ Double Angle Strip 1, which is mounted pivotally by a Bolt and two Nuts (S.M. 262) to a $2\frac{1}{2}''$ Strip 2 secured to the $5\frac{1}{2}'' \times 2\frac{1}{2}''$ Flanged Plate.

Model No. 1.106 Bagatelle Table

	Parts :	require	d:				
4 of 5 ", 3 ",	No. 1	1 8 25	of No. 12	7	0000		
	6					271112	
VI OR	3 6				1		

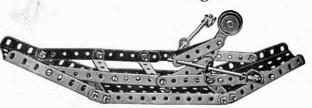
Model No. 1.107 Quick Return Device

Parts required:

2	of	No.	2	1	of	No.	24
1			3	6			35
2	,,	,,	5	15	,,	,,	37
2	,,	,,,	11	2	,,	,,	37A
2	,,	,,	-12	3	,,	,,	48A
1	,,	,,	17	1	,,	,,	52
2			184	2			125



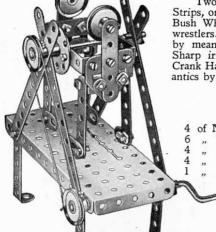
Model No. 1.108 Rowing Boat



Parts required:

4	of	No.	2	1 4	of	No	. 35
4	,,	,,	5	24	,,	,,	37
4	,,	,,	10	3	"	,,	48A
7	,,	,,	12	1	,,	,,	52
2	,,	,,	16	2	,,	,,	54
1	,,	,,	22	1	,,	,,	111c

Model No. 1.109 The Wrestlers



Two $2\frac{1}{2}''\times\frac{1}{2}''$ Double Angle Strips, one of which is bolted to the Bush Wheel, form the arms of the wrestlers. The legs are all pivoted by means of Bolts and lock-Nuts. Sharp irregular movements of the Crank Handle will result in amusing antics by the wrestlers.

Parts required:

4	of	No.	2	1	of	No	. 19s
6 4 4 1	,,	,,	5	4	,,	,,	22
4	"	"	10	1	32	,,	24
4	,,,	22	10 12 16	3	"	"	35
1	"	"	16	24 5	"	"	37 38
7				1	"	"	40
'	6		,	6	"	"	48A
					.,		52
				2 2	,,	,,	111c
				2	,,	,,	126A

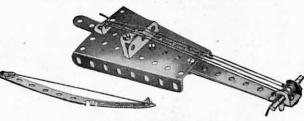
Model No. 1.110

Weather Vane

Parts required:

3	of	No.	1	14	of	No	. 37
2	,,	,,	2	1	,,	,,	52
1	,,	,,	11	1	,,	,,	54
2	,,	,,	12	1	,,	,,	111c
1	,,	,,	24	2	,,	,,	126

Model No. 1.111 Violin and Bow



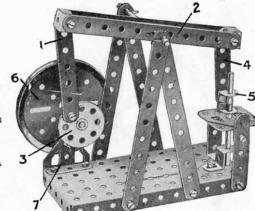
Parts required

4	of	No.	2	1	of	No.	12 18a 35	15	of	No.	37
1	,,,	,,	5	1	,,	,,	18A	1	,,	,,	40
1	,,	,,	11	2	,,	"	35	1	,,	,,	54
								1			126

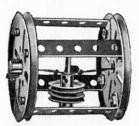
Model No. 1.112 Beam Engine

The connecting Strip 1 is attached pivotally by a Bolt and two Nuts (Standard Mechanism No. 262) to one end of the beam 2 and to the Bush Wheel 3. The Strip 4 is similarly connected to the other end of the beam 2 and to the Double Bracket 5 attached to the piston rod. The short rod carrying the flywheel 6 is journalled in a $2\frac{1}{2}$ " Strip supported by the Trunnion 7 and in a Reversed Angle Bracket bolted to the $2\frac{1}{2}$ " Strip.





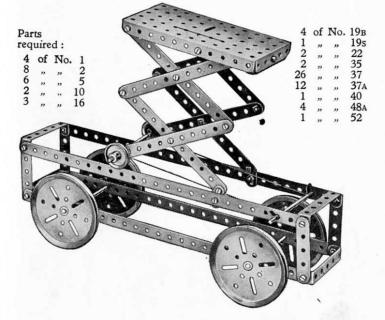
Model No. 1.113 Cum Bak



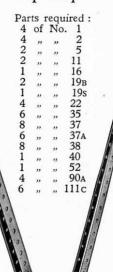
Parts required: 1 of No. 18A

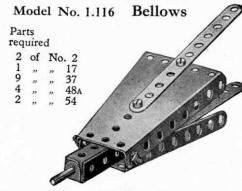
A short length of elastic is doubled and stretched between the centres of the 3" Pulley Wheels. A weight, consisting of two 1" fast Pulley Wheels and a 1½" Rod, is suspended from it in the middle of the drum. When the Cum Bak is rolled along any smooth level surface, the elastic becomes twisted and stores up sufficient energy to return the drum to its starting point. If the mechanism is concealed by a thin cardboard covering, the model will cause much amusement by its mystifying behaviour.

Model No. 1.114 Tower Wagon

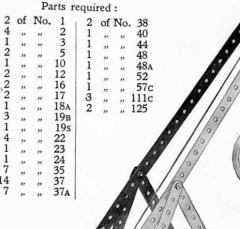


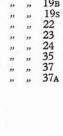
Model No. 1.115 Flip Flap



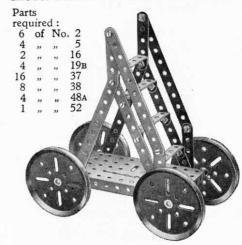


Model No. 1.117 Mobile Crane



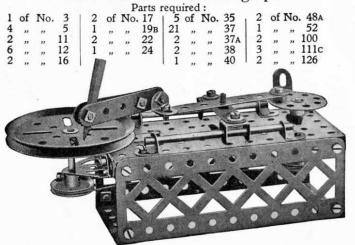


Model No. 1.121 Ladder on Wheels

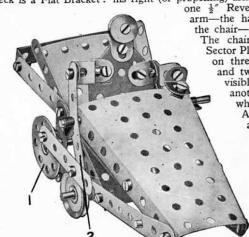


Model No. 1.122 The Invalid

Model No. 1.119 Meccanograph



Parts required:



When wheeled along the table the "invalid" appears to push himself energetically along. His neck is a Flat Bracket: his right (or propelling) arm consists of one Angle Bracket and one 1" Reversed Angle Bracket, and his left arm-the hand of which is bolted loosely to the chair-is formed by three Angle Brackets. The chair is composed principally of two Sector Plates and four 5½" Strips, and it runs on three 1" Pulley Wheels—one in front and two at the back. One of these (not visible in the illustration) drives by cord another 1" Pulley Wheel, the shaft of which also carries a Bush Wheel 1. As will be seen, a 21 Strip is pivoted at one end to this Bush Wheel and at the other end to a second 21" Strip 2. which, rocking about an axle journalled through its centre hole, is again pivoted to the invalid's hands.

Model No. 1.123 Bow and Arrow

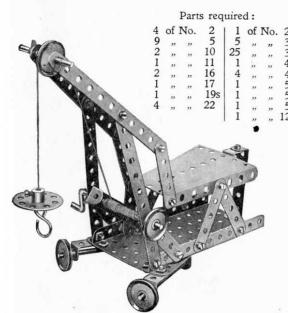
Parts required:

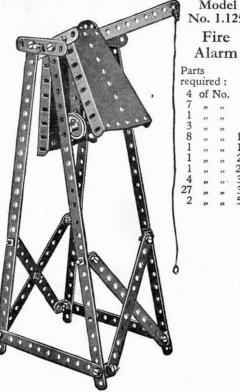
1 of No. 1 | 1 of No. 16 | 1 of No. 40



Model No. 1.124 Rotating Crane

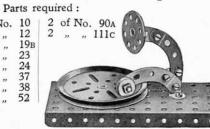
The running wheels of this crane are journalled in Double Angle Strips bolted to the base plate and secured at an angle by means of Flat Brackets. The rear of the Base Plate is supported on a Double Bracket. The jib is bolted losely to the supporting 5½" Strips and is connected by 2½" Strips to the Sector Plate which pivots about its supporting bolts. By moving this Sector Plate the elevation of the jib may be altered as desired. The movement is controlled by a Double Angle Strip mounted on the Crank Handle and connected pivotally to the plate by means of a 2½" Strip. A Reversed Angle Bracket bolted to an upright Double Angle Strip in the rear of the model serves to restrict the movement of the Sector Plate.





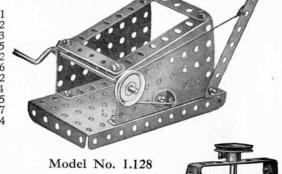
Model No. 1.126 Gramophone

2	of :	No.	10
1	,,	,,	12
1	,,	,,	19в
1	27	,,	23
1	,,	,,	24
6	,,	,,	37
1	,,	,,,	38
1	,,	22	52



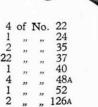
Model No. 1.127 Band Brake

			out.		U		~ 1	Dan	u	DI	ctiz	-
Model					Part	s r	equi	red:				
No. 1.125	1	of	No.	2	1 1	of	No.	19s	1	of l	No.	40
Fire	2	,,	,,	5	2	,,	,,	22	1	,,	.,,	52
Alarm	1	,,	,,	12	1	"	,,,	35	2	,,	,,	54
Alaim					10	"	"	37	1	,,	**	111c/
arts							ASI					A



Par	rts uire	d ·		
4		No.	2	
5	,,	,,	2	-
5 2 2	,,,	,,,	10	4
2	,,	"	16	
1	"	,,	19s	

Stamping



Model No. 1.129 Electric Elevator

Two pairs of cords 1 are stretched tightly on each side of the lift shaft to guide the cage 2 and two other cords 3 are secured at the top and bottom of the shaft and passed behind $2\frac{1}{2}$ " Strips 4 bolted to the cage. The drive from the motor is transmitted to the 3" Pulley Wheel 5 by means of a cord passed round a 1" Pulley on the motor armature.

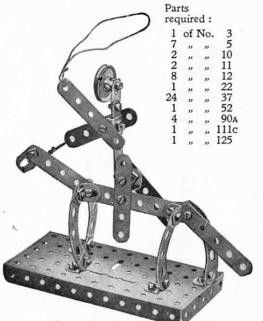
Parts required

4	of	No.	1	34	of	No	. 37
6	,,	,,	2	1	,,	,,	38
4	,,	,,	5	1	,,	,,	40
2	,,	,,	12	1	,,	22	48
4 2 3 3	,,	,,	16	6	,,	,,	48A
3	,,	.,	19 _B	1	"	,,	52
4	,,		22	2	,,	"	54
1	,,		24	2	,,	,,	100
3	,,		35	2	,,	,,	125
		**	100	-		**	5000000

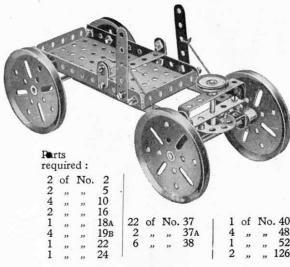
Electric Motor

(not included in Outfit).

Model No. 1.130 Mounted Cowboy



Model No. 1.132 Coaster

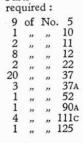


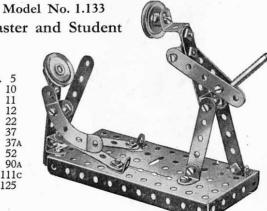
Model No. 1.131 Howitzer

Parts required:



Master and Student Parts

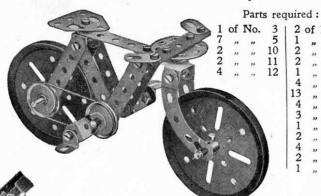




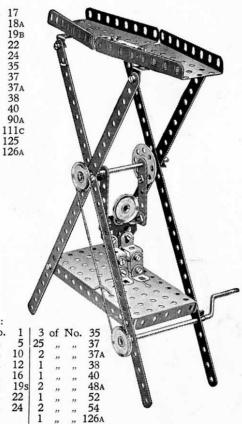
Model No. 1.134 Travelling Crane

The jib 1 is pivoted to the Flat Trunnions 2, which are bolted at 3 to Angle Brackets secured to a Bush Wheel. The latter is nipped to a 2" Rod 4 passing through the Plate 5 and further supported in a Double Angle Strip 6. A Washer and Spring Clip mounted on the Rod 4 below the Strip 6 secure the crane to the carriage. The jib is supported by means of cords 7 tied to 2½" Strips 8, the holes of which engage the shank of a Bolt passed through the Sector Plate 9, and its elevation may be altered by inserting this bolt in different holes in the Strips 8. The cord 10 of the brake lever is wound once round the Crank Handle, between two Washers.

Model No. 1.135 Bicycle



Model No. 1.137 Gymnast



Model No. 1.136 Luggage Truck

Parts required:

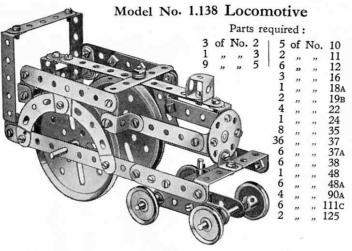
Parts required:

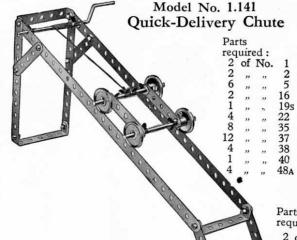
2	of	No.	2	18	of	No.	37			
8	,,	,,	5	2	,,	,,	48A		Ph.	
1	22	,,	16	1	,,	,,	52			
2	,,	,,	19 _B	4	,,	,,	90a			1
								1		
							-		0	1
								M		
			-	-	0	SALES OF	STATE OF THE PARTY.	_	17.00	æ

Parts required:

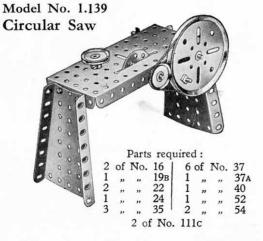
4	of	No.	2	4	of	No.	22	1	of	No.	44
7	,,	,,	5	1	,,	,,	23	3	,,	,,	48A
1	,,	,,	10	1	,,	,,	24	1	,,	,,	52
2	,,	,,	12	5	,,	,,	35	1	,,	,,	54
2	,,	,,	16	27	,,	"	37	1	"	"	57c
2	,,	"	17	6	,,	"	38	2	"	,,	126a
1	,,	,,	19s	1	,,	,,	40	1			

One of the $2\frac{1}{2}$ " Strips representing the arms of the gymnast is bolted to a Bush Wheel secured on a $3\frac{1}{2}$ " Rod. When the Crank Handle is rotated the gymnast turns complete somersaults in a very amusing manner. The gymnast's "arms" must be pivoted to the Angle Brackets forming his shoulders by means of Bolts and lock-Nuts.





The bogie is connected pivotally to the locomotive body by means of a l_2^{1} Rod journalled in a Double Bracket, which is secured in the centre of the bogie, and in a $2\frac{1}{2}$ " $\times \frac{1}{2}$ " Double Angle Strip that is secured between the main side frames. Two Spring Clips between the Double Angle Strip and Double Bracket space the bogie at the correct distance.



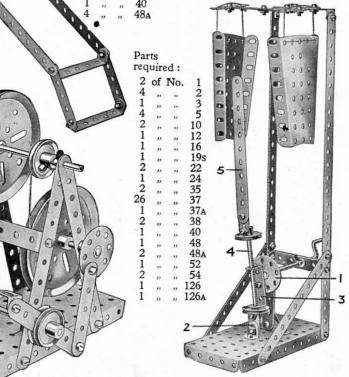
Model No. 1.140 Treadle Grindstone

> Parts required:

4	of	No.	2
1	,,	,,	2 3 5
1	,,	,,	5
1	,,	,,	12
1 3 2 4	,,	,,	16
2	,,	,,	19 _B
4	,,	,,	22 24 35
1	,,		24
2	,,	,,	35
9	,,		37
2	,,	,,	37A
1 2 9 2 1	,,		40
1	,,	,,	48A
1	,,	,,	52

Model No. 1.142 Mechanical Gong

A Flat Bracket is connected pivotally to the base at 2 and is clamped rigidly to a 1" Pulley Wheel secured to the Rod 4. The latter passes through the 1½" Double Angle Strip 3 and carries at its upper end another Pulley to which is rigidly secured the striking arm 5. The Double Angle Strip 3 is pivoted to the Bush Wheel 1.



These Models can be built with MECCANO Outfit No. 1 (or No. O and No. OA) Model No. 1.143 Model No. 1.145 Flying Boats Model No. 1.146 Aeroplane Telescope Parts required: of No. 5 Parts required: of No. Model No. 1.147 Coco-nut Shy Model No. 1.144 Sedan Chair The Sector Plates are connected to the $5\frac{1}{2}'' \times 2\frac{1}{2}''$ Flanged Plate by two Flat Brackets. Marbles or Meccano Steel Balls Parts Parts required: may be used for coco-nuts. required: 4 of No. 1 of No. 40

Parts required:

6	of I	No.	48A
1	,,	,,	52
1	,,	,,	90a
2	,.	,,	100

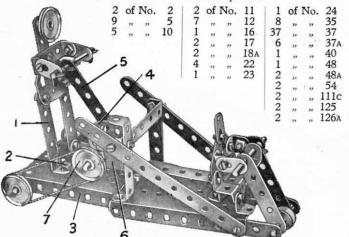
Model No. 1.148 Double Draw Bridge

			Pai	cts	requ	ired:				
of	No.	1	1	of	No.	19s	2	of	No.	38
,,	,,	2	2	,,	,,	22	1	,,,	,,	40
,,	,,	16	8	,,	,,	35	6	,,	,,	48 _A
			10			27	0			106.

Model No. 1.149 Coaster

The figure 1 is loosely attached by lock-nutted Bolts 2 to the Sector Plate 3 and is connected to the Bush Wheel 4 by the pivotally-attached $2\frac{1}{2}$ " Strip 5. The $1\frac{1}{2}$ " Rod carrying the Bush Wheel 4 is journalled in the Cranked Bent Strip 6, the 1" fast Pulley 7 being connected to the road wheel by a cord as shown.

Parts required:

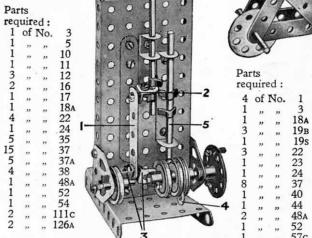


Model No. 1.151 Motor Cyclist and Pillion Rider

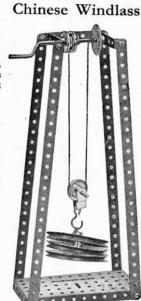
Parts required:

4 of No. 2 2 of No. 17 2 of No. 48A 9 , , 5 4 , , 22 2 2 , , 90A 4 , , 10 1 , , 24 2 , , 125 2 , , 11 2 , , 35 2 , , 126A 8 , , 12 30 , , 37 1 , , 16

Model No. 1.150 Tappet Valve Demonstration Model



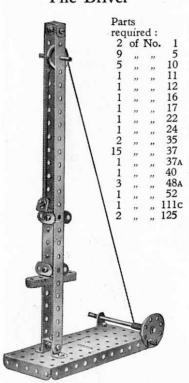
The upper end of the Strip 1 is connected pivotally by a Bolt and two Nuts to the crosshead bracket 2. The crankshaft is built up as follows: Two Angle Brackets 3 are each secured rigidly to the boss of a Pulley Wheel and are connected to each other by a \(\frac{3}{8}\)" Bolt carrying three Nuts. The Nuts are screwed tightly against the Brackets, sufficient space being left between the inner pair to enable the connecting Strip 1 to turn freely. The valve Rod 5 is operated by the Flat Bracket 4 that is clamped between two further 1" Pulleys on the crankshaft in such a way that its protruding end serves as a cam.



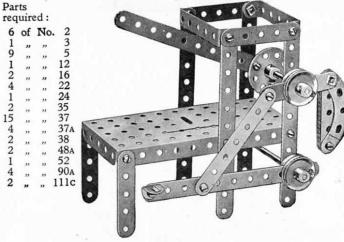
Model No.1.152

Model No. 1.154 Foot Hammer

Model No. 1.153 Pile Driver

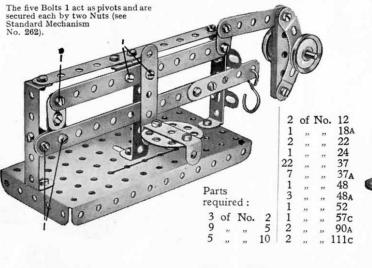


The winding cord is passed round the Pulley at the top of the model and is fastened to an Angle Bracket that is hooked under the protruding portion of a Flat Bracket bolted to the top of the driving head. When the Angle Bracket reaches the Pulley at the top it is pushed out a little, thus releasing the driving head.

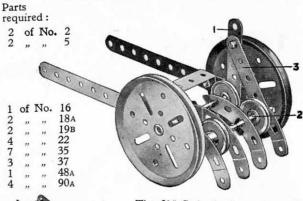


The treadle lever is connected pivotally to a $3\frac{1}{2}$ Strip by a Bolt and two Nuts. The upper end of this Strip is similarly connected to a $2\frac{1}{2}$ Strip that is clamped tightly between two Pulleys on the hammer Rod. Pressure on the treadle causes the hammer to descend on the work. When the treadle is released a weight pulls the hammer back to its original position.

Model No. 1.155 Heavy Duty Scales



Model No. 1.156 Horse Rake



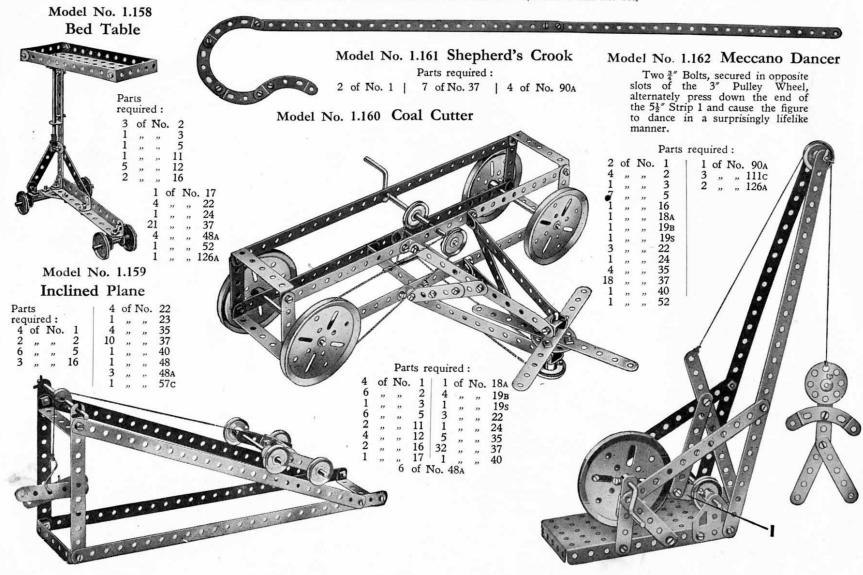
The $2\frac{1}{2}$ " Strip 1 pivots about the wheel axle. A $2\frac{1}{2}$ " Strip 3 is connected by a Bolt and two Nuts to the Strip 1 and the Shaft 2, which consists of two $1\frac{1}{2}$ " Rods, passes through its other end. On pulling the lever 1 towards the shafts the rake is lifted from the ground.

Model No. 1.157

Gravity Conveyor

Parts required:

,,		2	1 2			
	33	4)	22	,,	37
		5	1	,,	,,	48
		12	3			90
	,,	"" ""3	" " "	" " "	" " " " " "	,, ,, 12 , 3 ,, ,,

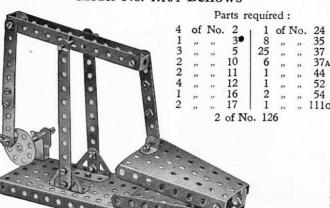


Model No. 1.165

Model No. 1.163 Eccentric Dancers Crosshe

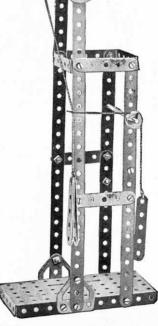
Par	uire	ed:			
6 4 6	of "	No.	5 10		
6	"	"	10 12 17		
1 4 1	"	"	22 23	The state of the s	
20	"	"	24 37	7000	
				0 0	
		A			
4	of	No.	484		
4 2 1 2	"	1	11c 25		
2	"	" 1	26 _A		

Model No. 1.164 Bellows



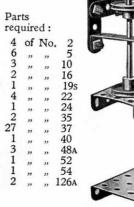
Crosshead Demonstration Model

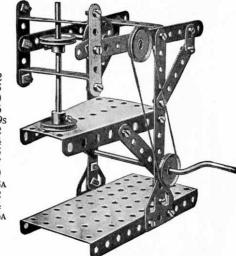
		Pa	rts	requi	red	:	
2	of	No.	1	3			. 35
4	,,	,,	2	20	,,	,,	37
9	,,	,,	5	1	,,	,,	40
2	,,	,,	16	2	,,	,,	48A
1	,,	,,	23	1	,,	,,	52
1	,,	,,	24	2	,,	,,	126A



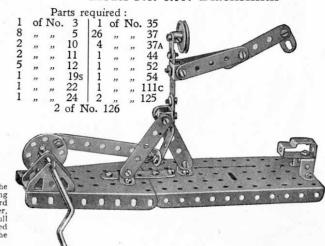
This is an apparatus for determining the forces that act at the crosshead of a reciprocating engine. The upper inclined length of cord represents the connecting rod and the lower, or vertical portion, the piston rod. The pull on the third cord indicates the pressure exerted on the slide bars of the engine due to the angularity of the connecting rod.

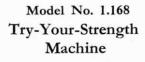
Model No. 1.166 Drop Stamp





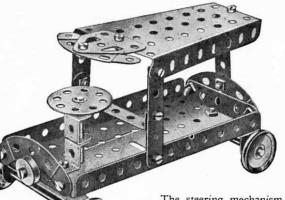
Model No. 1.167 Blacksmith





Parts
required:

4 of No. 1
1 " " 2
6 " " 12
1 " " 17
3 " " 22
1 " " 23
2 " " 35
17 " " 35
1 " " 52
1 " " 111c
2 " " 126
1 " " 126A



Model No. 1.171 Motor Van

-			rts re			W.T	27
3	of	No.	5	17	of	No.	
1	,,,	"	11	1	,,	,,	40
1	,,	,,	12	3	,,	,,	48A
1 2 1	,,	,,	16	1	,,	,,,	52
1	,,	,,	17	1	,,	,,	54
4	,,	,,	22	3	,,	,,	90a
1	,,	,,	23	1	,,	,,	111c
1	,,	,,	24	1	,,	,,	125
1	,,	**	35	1	,,	,,	126A

The steering mechanism is shown more clearly in Fig. 1.171a. A length of cord is given two or three turns round the steering column, and is held in position by a Spring Clip, its ends being tied to a $2\frac{1}{2}''\times\frac{1}{2}''$ Double Angle Strip. The latter is pivoted to the $5\frac{1}{2}''\times2\frac{1}{2}''$ Flanged Plate of the lorry by means of a Bolt and two Nuts (see Standard Mechanisms Manual. Detail No. 262).

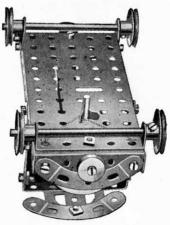
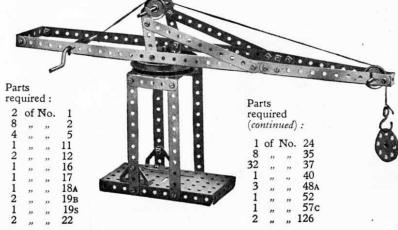


Fig. 1.171A

Model No. 1.170 Boat

Parts required: 4 of No. 1 2 " " 2 1 " " 5 2 " " 11 21 " " 37 1 " 48A 1 " " 52 2 " " 90A 2 " " 125

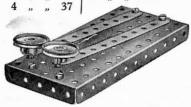
Model No. 1.172 Revolving Hammerhead Crane



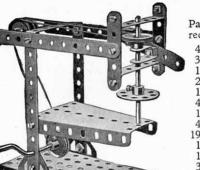
Model No. 1.169 Double Cable Key

Parts required:

2 of No. 2 | 1 of No. 52 · 2 , , , 22 | 2 , , , 111c



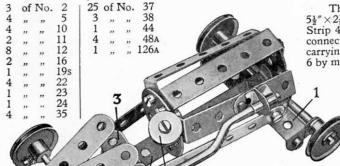




Par		d:	
4	of	No.	
3	,,	,,	
1	**	29	
2	.,,	**	
1	"	"	

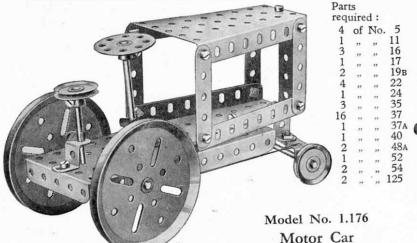
2 , , , 10s 4 , , , 19s 4 , , , 22 1 , , 24 4 , , , 35 19 , , 37 1 , , 40 1 , , 44 3 , , 48A 1 , , 52 1 , , 54 2 , , , 126A

Model No. 1.174 Racing Motor Car



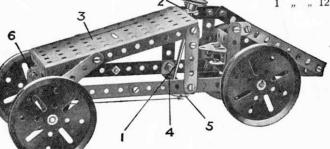
The Double Angle Strip 1 carries the front road wheels and is bolted pivotally to the 5½" Strip 2, whilst the rear axle is journalled in two Angle Brackets rigidly secured to the Strip 2. A Cranked Bent Strip 3 represents a seat. The steering wheel consists of a ½" Pulley 4 bolted to an Angle Bracket.

Model No. 1.175 Motor Tractor

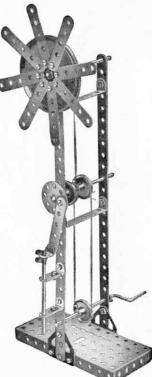


The steering column 1 is journalled in an Angle Bracket 2 bolted to the $5\frac{1}{2}'' \times 2\frac{1}{2}''$ Flanged Plate 3, and in the second hole of the $2\frac{1}{2}'' \times \frac{1}{2}''$ Double Angle Strip 4. A Bush Wheel 5, secured to the lower end of the steering column, is connected by two short lengths of cord to a second $2\frac{1}{2}'' \times \frac{1}{2}''$ Double Angle Strip carrying the front axle. The Strip is pivoted to a similar Double Angle Strip 6 by means of a Bolt and Nuts (Standard Mechanism No. 262).

4 7 1	of	No.	2 5 10	3 4 1 1	Pa of "	No.	16 19B 22 24	25 2 4 1	of "	No. " "	37 37 38 40	4 1 2 1	of		52 54 111c
-	"	,,,					-					1	,,,	"	125
							2	97	>			1			126

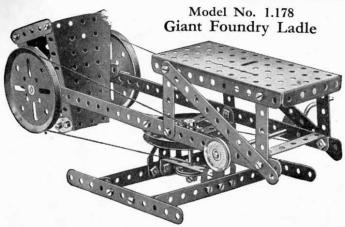


Model No. 1.177 Windmill Pump



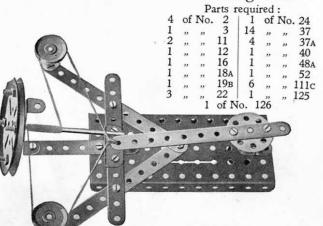
Parts required:

2	of	No.	1	4	of	No.	35
9	,,	,,	5	24	,,	,,	37
2	,,	,,	10	4	22	,,	37A
923311	,,	,,	12	3	,,	,,	38
3	,,	,,	16	1	,,	,,	40
1	,,	,,,	19в	2	,,	,,	48A
1	,,	"	19s	1	,,	"	52
4	,,	"	22	2	,,	,,	111c
1	,,	. ,,	24	2	,,		126a



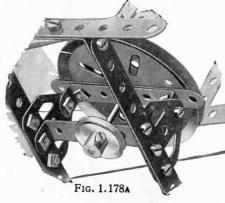
The ladle pivots about a $3\frac{1}{2}$ " Axle Rod carrying a 3" Pulley at each end in addition to a Bush Wheel and a $2\frac{1}{2}$ " Strip. The two latter parts are bolted to the side flanges of the Sector Plates and the Bush Wheel is nipped in position on the Rod. The pivot about which the superstructure turns is shown in Fig. 1.178A.

Model No. 1.179 Boat Steering Gear



Parts required:

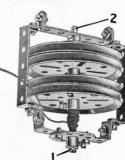
2	of	No.	1	3	of	No.	22
6	,,	,,	2	1	**		24
1	,,	,,	3	36	,,		37
7	,,	,,	5	6	"	,,	37A
1 7 2 2 1 1 3	,,	,,	10	1	**		40
2	,,	,,	12	6	**		48A
1	,,	,,	16	1	"	**	52
1	,,	,,	17	2	,,	**	54
3	,,	,,	19в	6	,,		111c
1	,,	23	19s	2	,,	,,	126A



Model No. 1.180 Gyroscope

The 5/32" Bolt 1 is gripped by the Set-Screw of the Bush Wheel. The lower end of the Rod 2 of the gyroscope enters the boss of the Bush Wheel and rests on the shank of the Bolt 1.

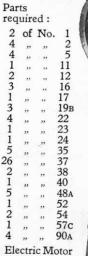
Par		ed	
4		No.	12
ĩ	,,	,,	16
4	"	,,	19B
1	,,	"	24
10	"	"	37 40
4	"	"	
4	,,	,,,	48A



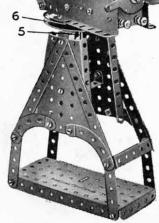
Model No. 1.181 Elevated Jib Crane

A 1" fast Pulley Wheel secured to the armature spindle of the Electric Motor is connected by an endless cord to the 3" Pulley Wheel 1. A 1" fast Pulley 2 on the same Rod as the latter is similarly connected with a second 3" Pulley Wheel 3. A cord wound on the Rod to which the latter is secured carries the load hook. The jib is supported by two cords 4, and the whole superstructure t, and the whole superstructure which is secured to the 3"
Pulley Wheel 6 is capable of revolving with the Rod 5.
The latter is journalled in two 2½" ½" Double Angle Strips secured between the Sector Plates in the base of the model.

of the model.



(not included in Outfit).



Model No. 1.182 Telpher Span

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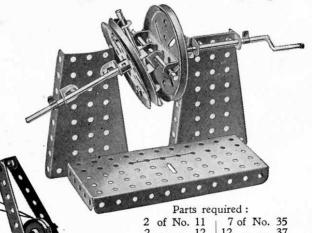
Parts required:

Model No. 1.183 Ladder on Wheels

Parts required: of No 1 | 16 of No. 37



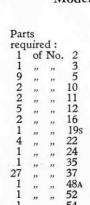
Model No. 1.184 Hooke's Coupling

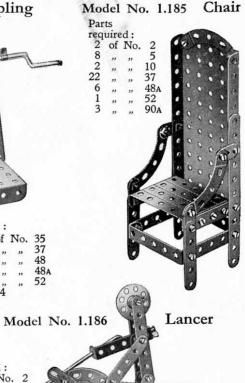


This model will provide many hours of enjoyment. The cords may be made to any length to allow the load to be carried from one side of the room to the other, and, if necessary, a better grip may be obtained by winding the operating cord twice round the Pulley on the Crank Handle. The open sides of the bucket may be closed with cardboard so that it may be loaded with marbles, beads, etc. The bed of the telpher may be screwed on to a solid base with ordinary wood screws to give better support. The pulley bracket, and that securing the cord on which

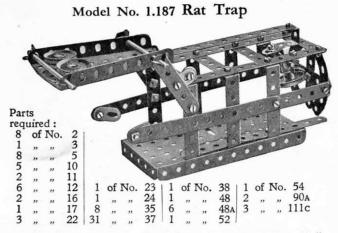
the bucket travels should be screwed in a suitable position on the opposite

side of the room.



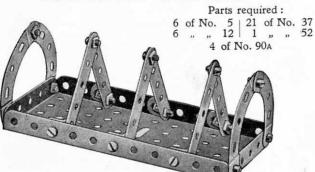


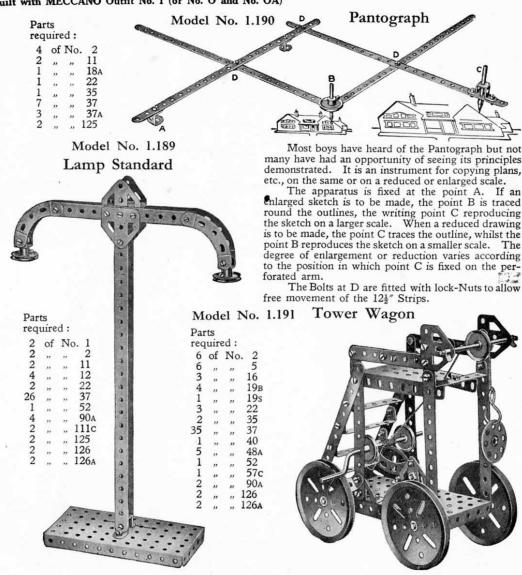




The "bait" consists of a 1" fast Pulley and a $\frac{1}{2}$ " loose Pulley suspended by means of a cord from a Double Bracket. The latter is bolted to a $1\frac{1}{2}$ " $\times \frac{1}{2}$ " Double Angle Strip that is free to turn on a 2" Rod journalled in a pair of Angle Brackets. A Flat Bracket bolted to the Double Bracket engages a second Double Bracket on the end of a $5\frac{1}{2}$ " Strip that is bolted to the door of the cage. If the "bait" is touched, the heavily-weighted door falls into place, and is prevented from re-opening by catches formed from Flat Brackets secured to $5\frac{1}{2}$ " Strips that are bolted to the trap by their extreme ends and act as springs.

Model No. 1.188 Toast Rack

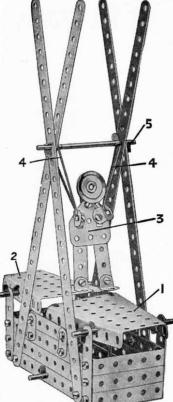




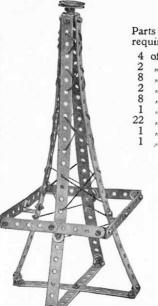
Model No. 1.192 A Sudden Appearance

Model No. 1.193 Eiffel Tower

Model No. 1.195 Drill

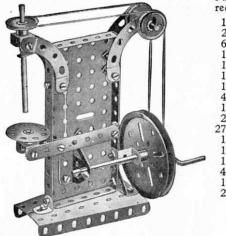


The Sector Plate 1, forming the lid, is carried pivotally on an axle rod that passes through its sides three holes from the end, and the rear Sector Plate 2 is pivoted in a similar manner, excepting that the rod in this case passes through the fourth hole from the end. Pieces of thin elastic are tied to the end holes in each side of the front Sector Plate at its widest end. and are connected to a Rod journalled in the sides of the box. The "Meccanitian" 3 is placed face downward inside the box with his feet towards the far end of the model. The tension of the elastic holding the lid I should be sufficient to keep him in this position. On tilting the Plate 1 slightly, however, he will suddenly shoot out of the box, drawn by the elastic bands 4 connected to the 31" Axle Rod 5.



required:

4 of No. 1
2 " 2
8 " 5
2 " 11,
8 " 12
1 " 22
22 " 37
1 " 40
1 " 111c



Parts
required:

1 of No. 3
2 " " 11
6 " " 12
1 " " 16
1 " " 18A
1 " " 19B
1 " " 19s
4 " " 22
1 " " 35
27 " 37
1 " 40
1 " " 54
4 " " 90A
1 " " 125
2 " " 126

Model No. 1.196 Revolving Tricyclist

Model No. 1.194 Top

To spin the top wind a length of cord round the Rod, as shown place on a smooth surface and give the cord a sharp pull. When the cord is clear of the rod remove the 5½ Strip and the top will continue to spin for a considerable period.



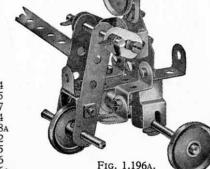
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Parts required:



Parts required:

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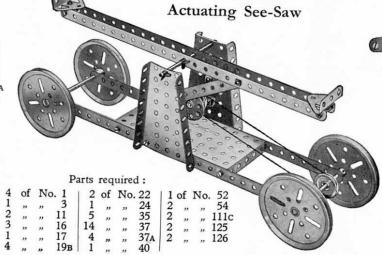


Model No. 1.198

Model No. 1.197 Guillotine

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Model No. 1.200 Coat Hanger

Parts required

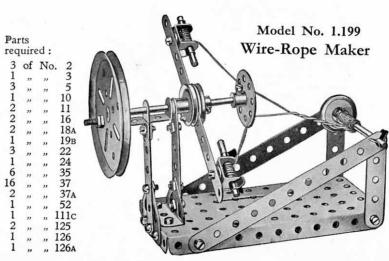
1 of No. 1 | 2 of No. 5 | 1 of No. 57c

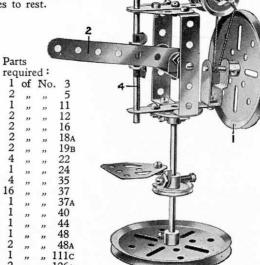
2 " " 2 | 6 " " 37

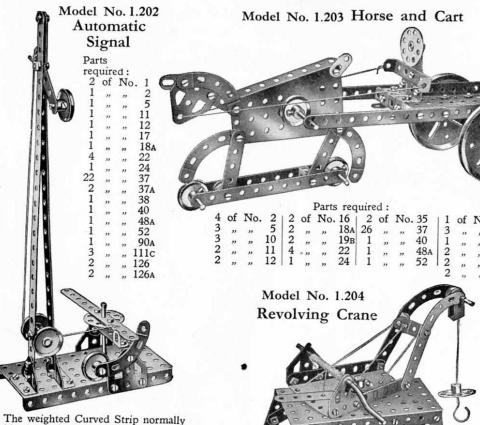
Model No. 1.201 Automatic Drill

Cord is passed round the Pulley on the drill spindle 4 and thence over the Pulleys 3 and round the shaft of the Pulley 1. The lever 2 (a $3\frac{1}{2}$ " Strip) is pivoted by a Bolt and two Nuts at its inner end to an Angle Bracket, and the latter is bolted to a $1\frac{1}{2}$ " \times 1 Double Angle Strip which, in turn, is bolted between the vertical $2\frac{1}{2}$ " Double Angle Strips. The arm of the lever engages between two Washers on the drill spindle, and on pressing the lever, the drill spindle with its 1" Pulley is forced downwards, thus tightening the Cord, which then transmits the

drive to the drill spindle. Immediately pressure on the lever is released, the drill comes to rest.



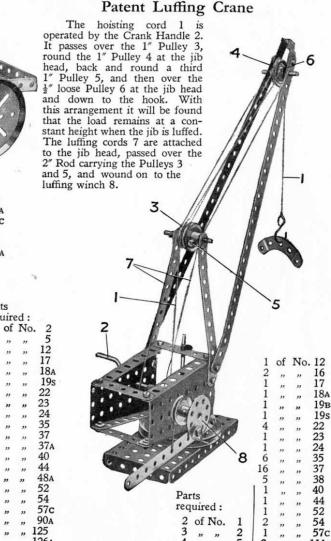


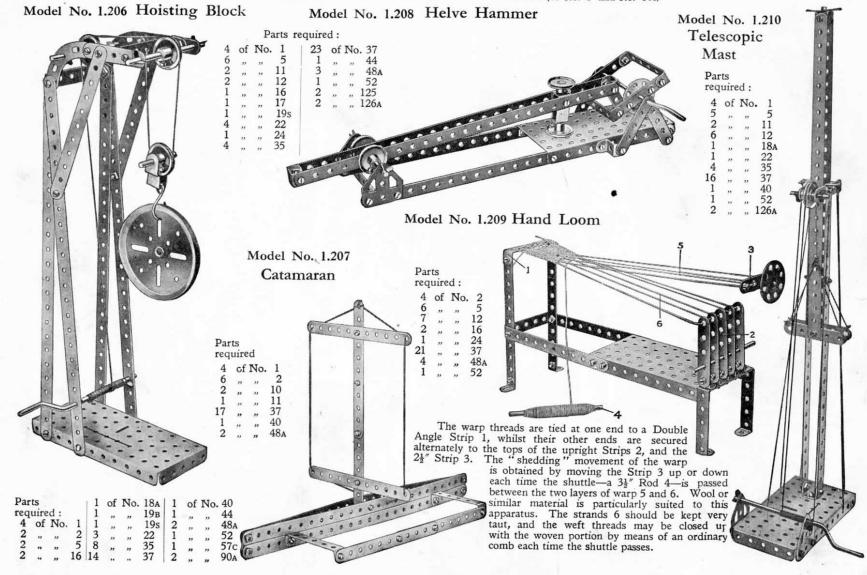


holds the end of the 51" Strip against an Angle Bracket, allowing the signal arm to fall to the "all clear" position. Any train passing the signal however. strikes the opposite end of the 51" Strip, and by means of the cord shown, raises the arm to indicate "danger." The Curved Strip moves to allow the end of the 51" Strip to pass over it, and is returned to its original position by reason of its weighted end. The signal then remains at "danger" until the mechanism is re-set.

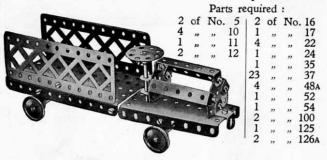
Parts required:

Model No. 1.205 Patent Luffing Crane



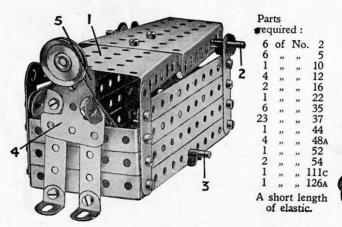


Model No. 1.211 Motor Lorry

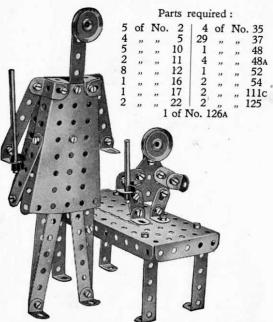


Model No. 1.212 Disappearing Meccanitian

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



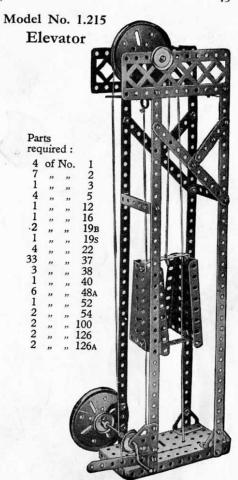
Model No. 1.213 Dignity and Imprudence



Model No. 1.214 Field Roller

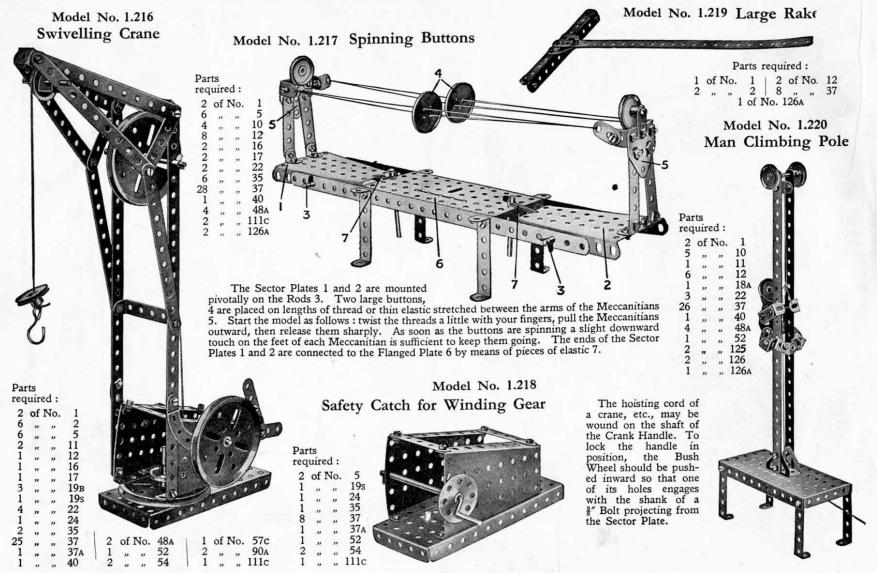
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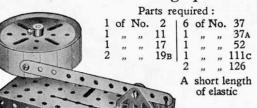


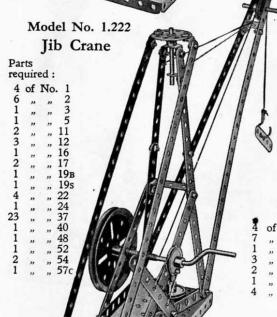
Two cords stretched between the base plate of the model and the upper structure are passed through holes in the Double Angle Strips of the cage to form guides. A further cord is tied to the upper Double Angle Strip, and after being led over the 3" Pulley at the head of the model is tied to the shaft of a Crank Handle.



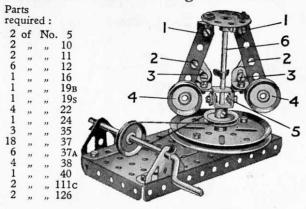


Model No. 1.221 Seismograph





Model No. 1.223 Centrifugal Governor

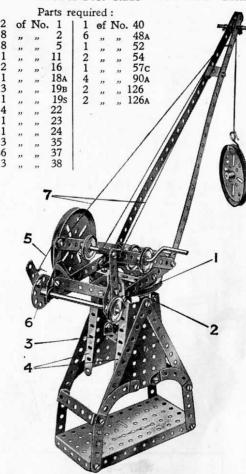


The 3" Pulley Wheel is bolted to the $5\frac{1}{2}$ " $\times 2\frac{1}{2}$ " Flanged Plate as shown, and the Rod 6 is free to rotate in its boss. The Bolts 1, 2, 3, are provided with lock-nuts. When the engine to which the governor is attached works at too great a speed, the 1" fast Pulley Wheels 4 fly outward and lift the two Double Brackets 5. In actual practice this movement is utilised to close the engine valves and so reduce speed.

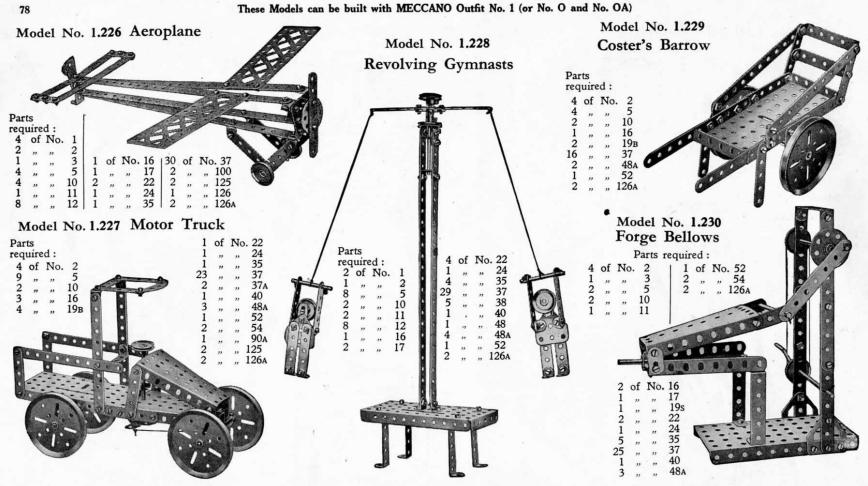
Model No. 1.224 Stone-Sawing Machine

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Model No. 1.225 Elevated Crane

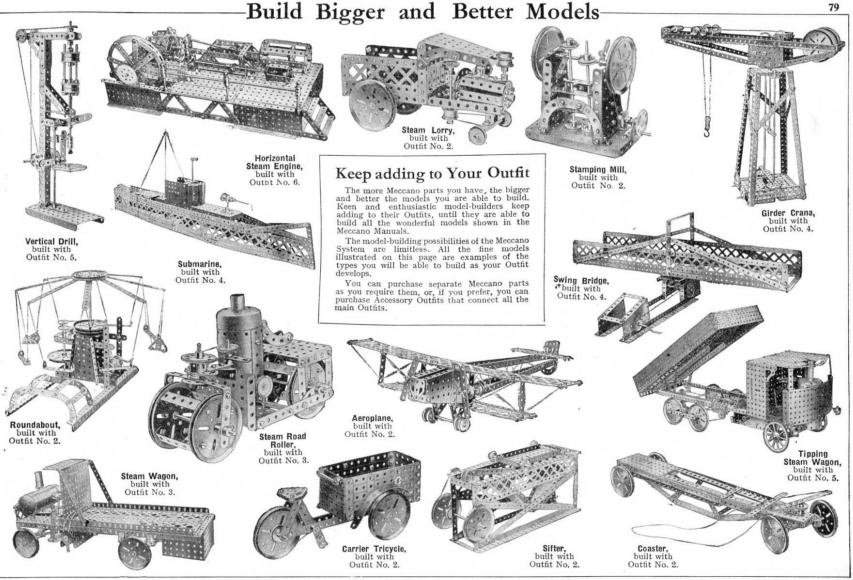


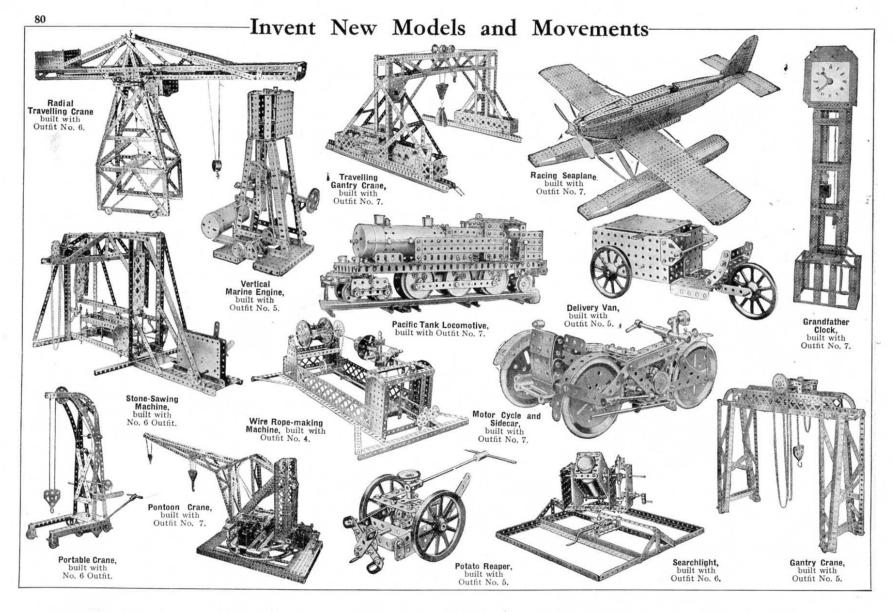
The base of the swivelling portion of the crane consists of a 3" Pulley Wheel 1, which has a $3\frac{1}{2}$ " Axle Rod nipped in its boss. The Rod is journalled in two $2\frac{1}{2}$ " Double Angle Strips 2 and 3 secured between the Sector Plates 4. The brake cord 5 passes round the 3" Pulley as shown, and is tied to one of the holes in the Bush Wheel 6. The cords 7 serve merely to support the weight of the jib.



HOW TO CONTINUE

This completes our examples of models that may be made with MECCANO Outfit No. 1 (or No. O and No. OA). 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 may be obtained from any Meccano Dealer.





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Full instructions for building a fine range of models are included with each Outfit.

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1111111111	1.60; 1.188 1.57; 1.211 0.45 1.48 locus 1.71 1.71 1.71 1.71 1.71 1.71 1.71 1.71 1.71 1.71 1.71 1.71 1.71	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	ar on Rider	00173 0035 00147 01190 0149 0090 0050 0072; 0.96; 1.44	1.153 Double Action 1.98 00.14 00.14	00.100 0.109 00.109 00.7
Description. Lathe Bench Lawn Mower Lazy Tongs Letter Balance Level Crossing Barrier Lever of the First Order ", ", Second ", Light Cruiser Inid", Light Cruiser Linet Inid Cruiser Linet Inid Cruiser Linet Inid Cruiser	Locomptive Lorry, Motor Loury, Motor Loud Speaker Lugage Cark Machine for tracing a locus Magic Plate Mail Bag Hanger Man and Boy	", Climbing Pole Master and Student Meocano Boy Man Mechanical Gong Medal Milk Maid Missing Link, The Moro Rail Motor Car	Racing , Cycle and Sidecar , Cyclist and Pillion Mountain Transport Mounted Cowboy Music Stand Notice Board	Ore Crusher Organ Ostrich Pantograph Parallel Bars Pecking Hen Pen Rack	river Connection, d Gear g Bench rer's Hawk	Plough Prounatic Grain Elevator Portal Portato Chopper Potter's Wheel Prehistoric Animal Armadillo Print Trimmer Propeller Propeller Pulley Block 0.114; 1.16 "Shafting "Single Sheave "Shafting "Pump Car Pump Car Pump Bouble Action "Windmill "Windmill "Windmill "Windmill "Machine "M

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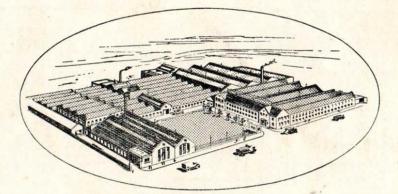


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