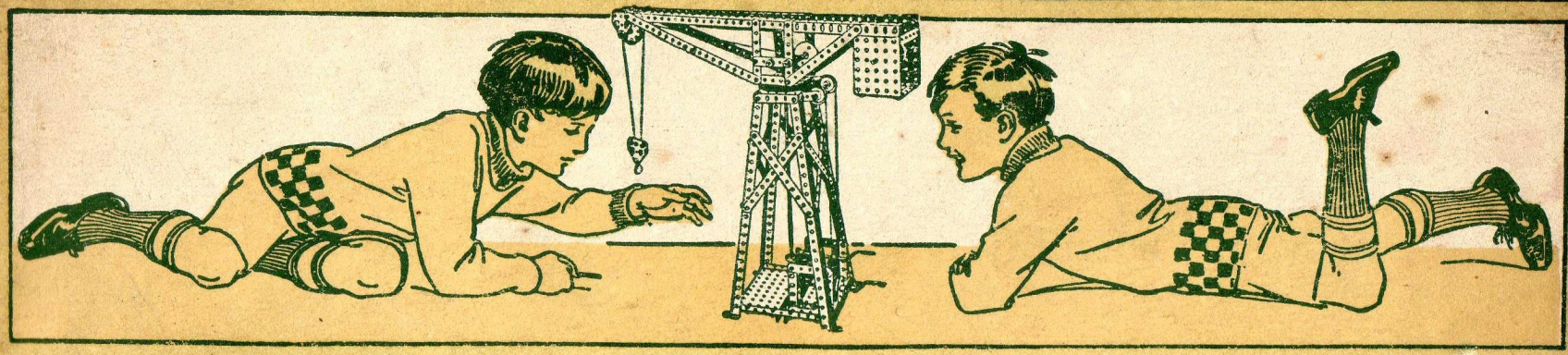


MECCANO

(TRADE MARKS 296321, 76, 12633, 10274, 55/13476, 569/13, 884/25, 2913, 80, 124, 336)

INSTRUCTIONS

FOR OUTFITS Nos. 00 to 3

1/6

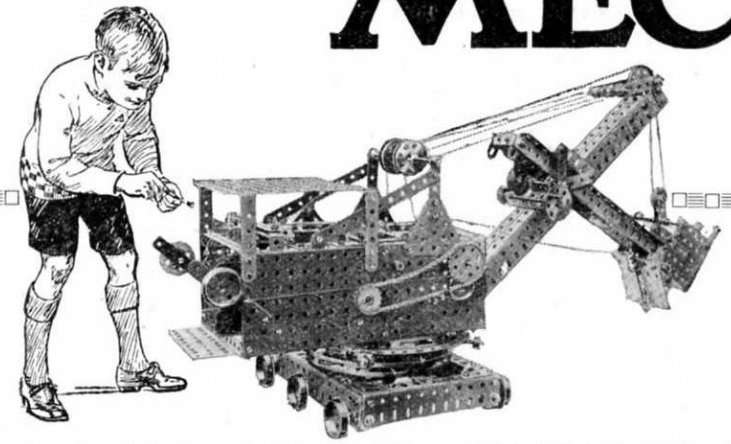
No. 28A

ENGLISH EDITION

628/100

MECCANO

THE TOY THAT MADE ENGINEERING FAMOUS



The Meccano system consists of accurately made and highly finished engineering parts with which almost every mechanical movement known 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 the youngest boy can commence to build models as soon as he gets his Outfit home. A screwdriver, provided in the Outfit, is the only tool necessary.

When you have built all the models shown in this book you will want to build others of a more advanced type, and you cannot do better than purchase a copy of the No. 4–7 Manual from your dealer. This Manual contains illustrations of a fine selection of models, a large number of which you will be able to build by adding a few extra parts to your equipment.

There is practically no limit to the number of models that can be built with Meccano. The most wonderful feature about the system is that it is *real engineering ;* it is fascinating and delightful and it gives you a satisfaction beyond anything that you have ever previously experienced.

IF IN DOUBT WRITE TO MECCANO LIMITED

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

Although all kinds of queries are put to us on all manner of subjects, the main interest is, of course, engineering. No one has such a wonderful knowledge of engineering matters as that possessed by our staff of experts. This vast store of knowledge, gained only by many years of hard-earned experience, is at your service. *We want the Meccano boy of to-day to be the famous engineer of to-morrow.*

HOW TO BUILD WITH MECCANO

Make the simple models first—there is loads of fun in them—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. When you want to add more parts to your Outfit so that you can build bigger models, you can always get them from your dealer.

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

All models shown in this Manual are numbered and for reference purposes each model number is preceded by the number of the Outfit with which it may be built. Thus, for example, model No. 00.60 may be built with No. 00 Outfit, and model No. 2.20 with No. 2 Outfit.

THE "MECCANO MAGAZINE"

The *Meccano Magazine* is the Meccano boy's 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 interesting articles on engineering and electrical subjects, and deals with many 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. Write to the Editor, *Meccano Magazine*, Binns Road, Liverpool, giving the names and addresses of three of your chums who are not Meccano boys and enclosing 6d. in stamps. He will then forward a specimen copy of the "*M.M.*" post free. It is sent regularly to subscribers at the rate of 4/– for six issues, post free, or it may be ordered from any Meccano dealer, newsagent or bookstall, price 6d. per copy.

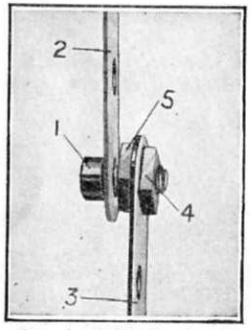
MECCANO STANDARD MECHANISMS

There are a number of Meccano movements that have to a certain extent become standardised, that is to say they may be applied to more than one model, in most cases without any alteration, but in some few instances with only slight alterations to the original movement. These have been collected and classified, and may be obtained in the form of a Manual entitled "Meccano Standard Mechanisms." It will be observed that many of these Standard Mechanisms are referred to in the instructions for building the more intricate models in this book.

You may obtain a copy of the "Standard Mechanisms" Manual from your dealer, price 1/–, or direct from Meccano Ltd., Binns Road, Liverpool, price 1/1½ post free.

IMPROVED MECCANO PARTS

A number of models included in this Manual show the new style 5½" × 2½" Flanged Plate (with flanges at the ends as well as the sides) and improved Sector Plate (with two additional rows of holes), but it should be noted that, although the new parts are more adaptable, the old-style plates may still be used in their place if desired. When it is required to journal an Axle Rod in a slot in the new Flanged Plates, an ordinary Strip should first be bolted to the Plate so that one of its holes forms an additional bearing for the Rod.

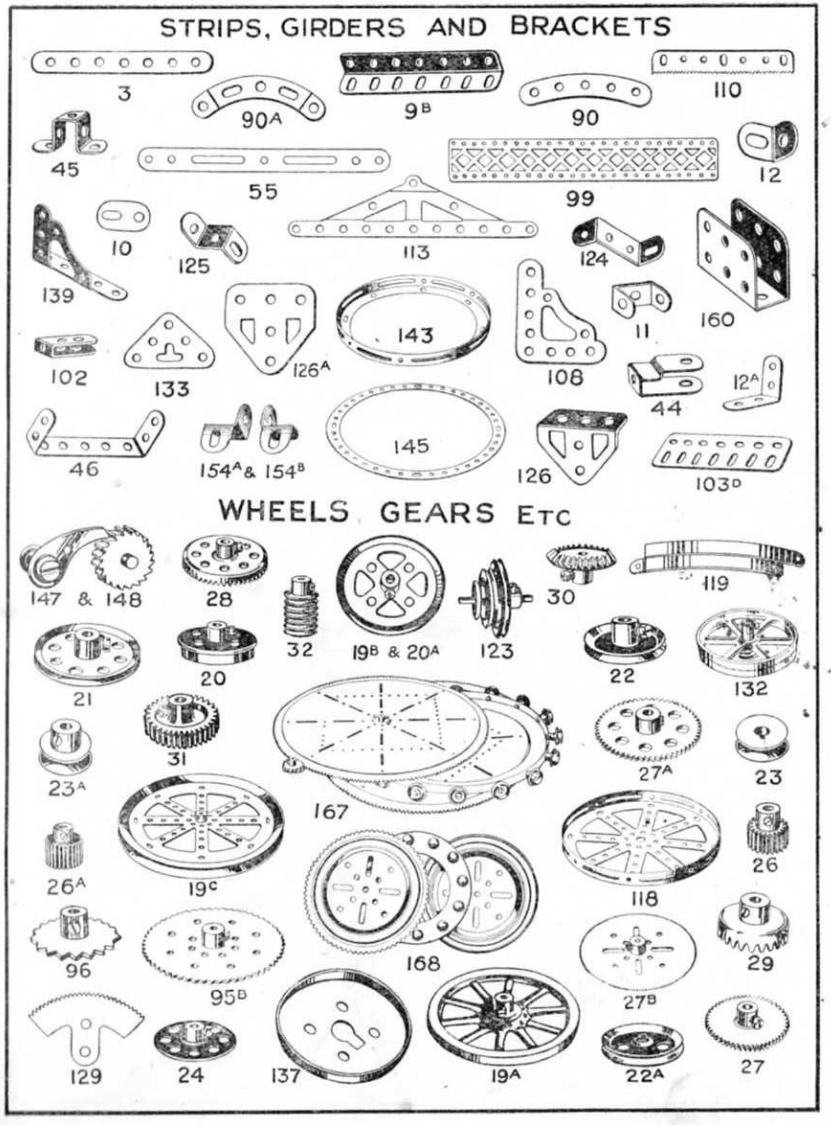


Standard Mechanisms No. 262

SIMPLE MECCANO PIVOTS

In building Meccano models it is frequently required to attach two parts together so that one or both are quite free to swivel. A very simple way to do this is shown under detail number 262 in the Meccano Standard Mechanisms Manual, and for the benefit of those readers who are unable to consult the special Manual, we have reproduced this detail. As will be seen, it consists of a simple type of pivot or swivel bearing formed by a bolt and two nuts. The bolt is secured rigidly to a Strip or Plate, etc., by means of the nuts, which are secured tightly against opposite sides of the Strip, sufficient space being left beneath the head of the bolt to permit another Strip to turn freely about its shank.

A somewhat similar form of swivel-joint, also widely used, consists of a bolt and lock-nuts (Standard Mechanisms No. 263). The two Strips to be connected pivotally are placed on the bolt and held in position by two nuts locked together on the shank. The Strips must be allowed a certain amount of play so that they can pivot independently about the bolt. These pivoting devices will be found equally valuable in the simplest and the most elaborate models.



Particulars and Prices of Meccano Parts

No.			s.	d.
	Perforated Strips			
1.	12½″	½ doz.	1	0
1a.	9½″	„	0	9
1b.	7½″	„	0	8
2.	5½″	„	0	6
2a.	4½″	„	0	5
	Angle Girders			
7.	24½″	each	0	8
7a.	18½″	„	0	6
8.	12½″	½ doz.	1	9
8a.	9½″	„	1	3
8b.	7½″	„	1	2
9.	5½″	„	1	0
*10.	Flat Brackets		0	2
*11.	Double Brackets	each	0	1
*12.	Angle Brackets, ½″×½″	doz.	0	3
*12a.	„ „ 1″×1″	½ doz.	0	4
*12b.	„ „ 1″×½″	„	0	3
	Axle Rods			
13.	11½″	each	0	2
13a.	8″	„	0	2
14.	6½″	„	0	1
15.	5″	„	0	1
15a.	4½″	2 for	0	1
16.	3½″	„	0	1
19.	Crank Handles, Large	each	0	2
19s.	„ Small	„	0	2
19a.	Wheels, 3″ diam., with set screws	„	0	6
20.	Flanged Wheels, 1½″ diam.	„	0	5
20b.	„ „ ¾″ „	„	0	4
	Pulley Wheels			
19b.	3″ dia. with centre boss and set screw	„	0	7
19c.	6″ „ „ „ „ „	„	2	0
20a.	2″ „ „ „ „ „	„	0	5
21.	1½″ „ „ „ „ „	„	0	4
22.	1″ „ „ „ „ „	„	0	3
23a.	½″ „ „ „ „ „	„	0	3
22a.	1″ „ without „ „ „	„	0	2
23.	½″ „ „ „ „ „	„	0	2
24.	Bush Wheels	„	0	4
25.	Pinion Wheels, ½″ diam.	„	0	6
25a.	„ „ ½″ „ double width face ...	„	0	8
26.	„ „ ½″ „	„	0	4
26a.	„ „ ½″ „ double width face ...	„	0	6
	Gear Wheels			
27.	50 teeth to gear with ½″ pinion ...	„	0	6
27a.	57 „ „ „ ½″ „ ...	„	0	6
27b.	183 „ „ „ ½″ „ (3½″ diam.)	„	1	3
28.	Contrate Wheels, 1½″ diam.	„	0	9
29.	„ „ ¾″ „	„	0	6
30.	Bevel Gears, ½″, 26 teeth	„	0	9
30a.	„ „ ½″, 16 „ } *Can only be*	„	0	6
30c.	„ „ 1½″, 48 „ } *used together*	„	1	6
31.	Gear Wheels, 1″, 38 teeth	„	1	0
32.	Worm Wheels	„	0	5
34.	Spanners	„	0	2
34b.	Box Spanners	„	0	4
35.	Spring Clips	per box (doz.)	0	3
36.	Screw Drivers	each	0	3

No.			s.	d.
36a.	Screwdrivers, Extra Long	each	0	6
36b.	Screwdriver, special	„	1	0
37.	Nuts and Bolts, 7/32″ ...	per box (doz.)	0	6
37a.	Nuts	„	0	3
37b.	Bolts, 7/32″	„	0	3
*38.	Washers	„	0	1
40.	Hanks of Cord	2 for	0	3
41.	Propeller Blades	per pair	0	4
43.	Springs	each	0	2
*44.	Cranked Bent Strips	„	0	1
45.	Double „ „	„	0	1
46.	Double Angle Strips, 2½″×1″ ...	½ doz.	0	6
47.	„ „ „ 2½″×1½″ ...	„	0	9
47a.	„ „ „ 3″ ×1½″ ...	„	0	10
48.	„ „ „ 1½″×½″ ...	„	0	4
48a.	„ „ „ 2½″×½″ ...	„	0	5
48b.	„ „ „ 3½″×½″ ...	„	0	6
48c.	„ „ „ 4½″×½″ ...	„	0	9
48d.	„ „ „ 5½″×½″ ...	„	0	9
50a.	Eye Pieces, with boss	each	0	4
52.	Perforated Flanged Plates, 5½″×2½″	„	0	5
52a.	Flat Plates, 5½″×3½″	„	0	5
53.	Perforated Flanged Plates, 3½″×2½″	„	0	3
53a.	Flat Plates, 4½″×2½″	„	0	3
54.	Perforated Flanged Sector Plates	„	0	3
55.	Perforated Strips, slotted, 5½″ long	„	0	2
55a.	„ „ „ 2″ „	„	0	1
56.	Instruction Manuals, No. 4-7 ...	„	1	6
56a.	„ „ No. 00-3 ...	„	1	6
56b.	„ „ No. 0	„	0	4
56c.	Meccano Standard Mechanisms Manual	„	1	0
57.	Hooks	2 for	0	1
57a.	„ Scientific	each	0	1
57b.	„ Loaded	„	0	3
58.	Spring Cord	per length	0	9
59.	Collars with Set Screws	2 for	0	3
61.	Windmill Sails	4 for	0	6
62.	Cranks	each	0	3
62a.	Threaded Cranks	„	0	4
62b.	Double Arm Cranks	„	0	3
63.	Couplings	„	0	6
63a.	Octagonal Couplings	„	0	8
63b.	Strip Couplings	„	0	8
63c.	Threaded Couplings	„	0	6
64.	Threaded Bosses	„	0	2
65.	Centre Forks	„	0	1
66.	Weights, 50 grammes	„	1	0
67.	„ 25 „	„	1	0
68.	Woodscrews, ½″	doz.	0	3
69.	Set Screws	„	0	3
69a.	Grub Screws, 5/32″...	„	0	4
69b.	„ „ 7/32″...	„	0	5
70.	Flat Plates, 5½″×2½″	each	0	4
72.	„ „ 2½″×2½″	„	0	2
76.	Triangular Plates, 2½″	„	0	2
77.	„ „ 1″	„	0	1
	Screwed Rods			
78.	11½″	each 0 6		
79.	8″	„ 0 5		
79a.	6″	„ 0 4		
80	5″	„ 0 3		
80a.	3½″	... each	0	3
80b.	4½″	... „	0	3
81.	2″	... „	0	2
82.	1″	... „	0	1

Meccano Accessory Parts will be supplied in colours unless nickelled parts are specially ordered.

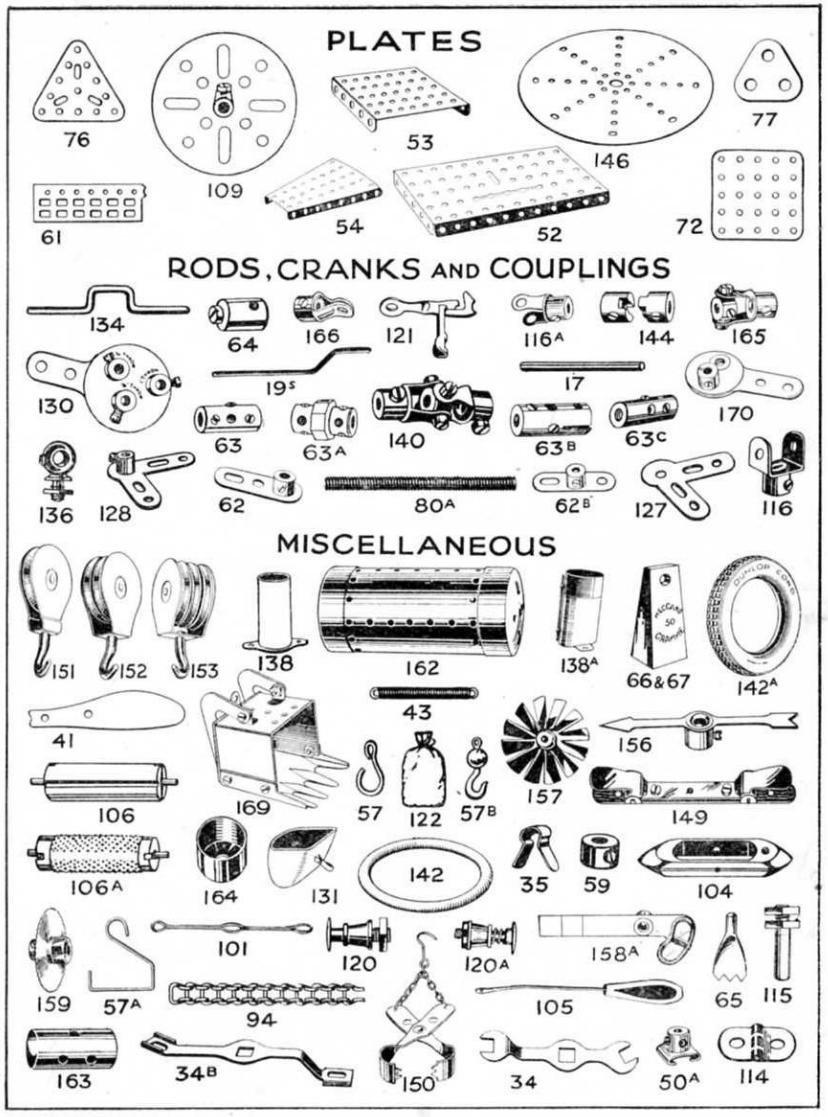
**IMPORTANT —These parts are available with nickel finish only.*

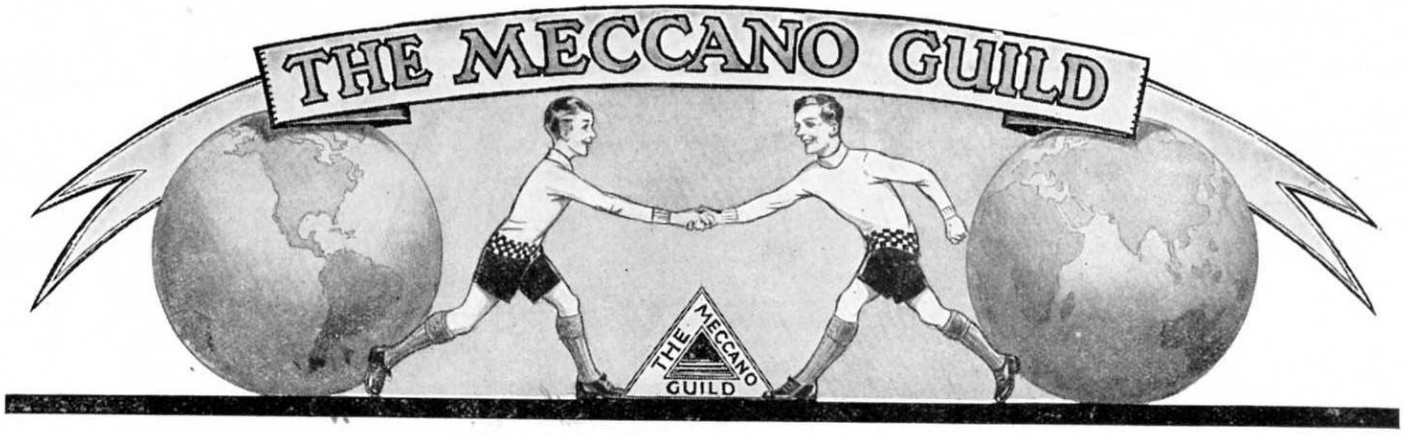
Particulars and Prices of Meccano Parts (*continued*)

No.		s.	d.
89.	5½" Curved Strips, 10" radius ... each	0	2
89a.	3" Curved Strips, cranked, 1⅜" radius, 4 to circle "	0	2
90.	2½" " " 2⅜" radius ... "	0	1
90a.	2½" " " cranked, 1⅜" radius, 4 to circle "	0	1
94.	Sprocket Chain ... ... per 40" length	0	6
*95.	Sprocket Wheels, 2" diam. ... ... each	0	5
*95a.	" " 1½" " ... ... "	0	4
*95b.	" " 3" " ... ... "	0	6
*96.	" " 1" " ... ... "	0	3
*96a.	" " ⅝" " ... ... "	0	3
97.	Braced Girders, 3½" long ... ... ½ doz.	0	9
97a.	" " 3" " ... ... "	0	8
98.	" " 2½" " ... ... "	0	8
99.	" " 12½" " ... ... "	2	6
99a.	" " 9½" " ... ... "	2	0
99b.	" " 7½" " ... ... "	2	0
100.	" " 5½" " ... ... "	1	0
100a.	" " 4½" " ... ... "	0	10
101.	Healds, for looms ... ... doz.	0	9
102.	Single Bent Strips ... ... each	0	1
103.	Flat Girders, 5½" long ... ... ½ doz.	0	10
103a.	" " 9½" " ... ... "	1	2
103b.	" " 12½" " ... ... "	1	3
103c.	" " 4½" " ... ... "	0	9
103d.	" " 3½" " ... ... "	0	7
103e.	" " 3" " ... ... "	0	6
103f.	" " 2½" " ... ... "	0	5
103g.	" " 2" " ... ... "	0	4
103h.	" " 1½" " ... ... "	0	4
103k.	" " 7½" " ... ... "	1	0
*104.	Shuttles, for looms ... ... each	7	6
105.	Reed Hooks, for looms... ... ... "	0	4
106.	Wood Rollers ... ... "	1	6
106a.	Sand Rollers ... ... "	1	9
107.	Tables for Designing Machines ... "	1	6
108.	Architraves ... ... "	0	2
109.	Face Plates, 2½" diam. ... ... "	0	4
110.	Rack Strips, 3½" ... ... "	0	2
111.	Bolts, ⅜" ... ... 2 for	0	1
111a.	" ½" ... ... 3 for	0	1
111c.	" ⅜" ... ... doz.	0	3
113.	Girder Frames ... ... each	0	3
*114.	Hinges ... ... per pair	0	4
115.	Threaded Pins ... ... each	0	2
*116.	Fork Pieces, Large ... ... "	0	3
116a.	" " Small ... ... "	0	3
117.	Steel Balls, ⅜" diam. ... ... doz.	0	6
118.	Hub Discs, 5½" " ... ... each	1	3
119.	Channel Segments (8 to circle, 11½" diam.) ... ... "	0	4
120.	Buffers ... ... "	0	2
120a.	Spring Buffers ... ... per pair	0	8
120b.	Compression Springs ... ... each	0	1
121.	Train Couplings ... ... "	0	2
122.	Miniature Loaded Sacks ... ... "	0	2
123.	Cone Pulleys ... ... "	1	3
*124.	Reversed Angle Brackets, 1" ... ½ doz.	0	4
*125.	" " " ½" ... "	0	3
126.	Trunnions ... ... each	0	2
126a.	Flat Trunnions ... ... each	0	1
127.	Simple Bell Cranks ... ... "	0	1
128.	Boss Bell Cranks ... ... "	0	3
*129.	Rack Segments, 3" diam. ... ... "	0	5
130.	Triple Throw Eccentrics ... ... "	1	0
131.	Dredger Buckets ... ... ½ doz.	1	0
132.	Flywheels, 2¾" diam. ... ... each	2	0
133.	Corner Brackets ... ... "	0	1
*134.	Crank Shafts, 1" stroke ... ... "	0	2
135.	Theodolite Protractors ... ... "	0	3
136.	Handrail Supports ... ... "	0	3
137.	Wheel Flanges ... ... "	0	3
138.	Ship's Funnels ... ... "	0	3
138a.	" " Cunard type ... ... "	0	9
139.	Flanged Brackets (right) ... ... "	0	2
139a.	" " (left) ... ... "	0	2
140.	Universal Couplings ... ... "	0	10
141.	Wire Lines (for suspending clock weights) ... ... "	0	9
142.	Rubber Rings, 3" rim ... . "	0	3
142a.	Dunlop Tyre to fit 2" diam. rim... "	0	4
142b.	" " " 3" " ... "	0	6
143.	Circular Girders, 5½" diam. ... ... "	1	0
144.	Dog Clutches ... ... "	0	6
145.	Circular Strips, 7" diam. over all ... "	0	9
146.	" Plates, 6" " ... ... "	1	0
*147.	Pawls, with pivot bolt and nuts ... "	0	3
*147a.	Pawls ... ... "	0	2
*147b.	Pivot Bolt with 2 nuts ... ... "	0	2
148.	Ratchet Wheels ... ... "	0	6
149.	Collecting Shoes, for Electric Locos "	1	6
150.	Crane Grabs... ... ... "	0	7
151.	Pulley Blocks, Single Sheave ... "	0	8
152.	" " Two " ... "	0	9
153.	" " Three " ... "	1	0
*154a.	Corner Angle Brackets, ½", right hand ... ... ½ doz.	0	6
*154b.	Corner Angle Brackets, ½" left hand "	0	6
155.	Rubber Rings, ⅝" ... ... each	0	1
*156.	Pointers, 2½" over all, with boss... "	0	4
157.	Fans, 2" diam. ... ... "	0	4
158a.	Signal Arms, Home ... ... "	0	5
158b.	" " Distant ... ... "	0	5
*159.	Circular Saws ... ... "	1	0
160.	Channel Bearings, 1½"×1"×½" ... "	0	2
162.	Boiler, complete with ends ... ... "	1	0
162a.	Boiler ends ... ... "	0	3
163.	Sleeve Pieces ... ... pair	0	6
164.	Chimney Adaptors ... ... each	0	2
165.	Swivel Bearings ... ... "	0	6
166.	End " ... ... "	0	3
167.	Geared Roller Bearings ... ... "	20	0
167a.	Roller Races, geared, 192 teeth ... "	4	6
167b.	Ring Frames for Rollers ... ... "	3	0
167c.	Pinions for Roller Bearings, 16 teeth "	1	0
168.	Ball Bearings, 4" diam. ... ... "	3	0
168a.	Ball Races, flanged ... ... "	0	6
168b.	" " geared ... ... "	0	9
168c.	Ball Casings, complete with balls "	1	9
169.	Digger Buckets ... ... "	2	0
170.	Eccentrics, ½" throw ... ... "	0	9

Meccano Accessory Parts will be supplied in colours unless nickelled parts are specially ordered.

**IMPORTANT.—These parts are available with nickel finish only.*





BADGE OF MEMBERSHIP

GUILD LEADER'S BADGE

WHAT THE GUILD MEANS

THE Meccano Guild is an organisation for boys, started at the request of boys, and conducted as far as possible by boys. In joining the Guild a Meccano boy becomes a member of a great brotherhood of world-wide extent, every member of which has promised to observe its three great objects :—

(1) *To make every boy's life brighter and happier.*
(2) *To foster clean-mindedness, truthfulness, ambition, and initiative in boys.*
(3) *To encourage boys in the pursuit of their studies and hobbies, and especially in the development of their knowledge of mechanical and engineering principles.*

HOW TO BECOME A MEMBER

MEMBERSHIP of the Guild is open to every boy possessing a Meccano Outfit, or Hornby Train Set, who satisfactorily fills in the prescribed application form The only conditions are that members promise to observe the objects of the Guild and to wear their badges on all possible occasions.

The price of the Guild membership badge is 7d. post free in the United Kingdom, but members abroad will be required to pay 5d. extra for registered postage. A remittance for the necessary amount should be sent along with the form of application. The Guild badge is beautifully enamelled in blue and white and is made for wearing in the lapel of the coat

MECCANO CLUBS

MECCANO CLUBS are founded and established under the guidance of the Guild Secretary at Headquarters and at the present time there are active Clubs in over one hundred towns and villages in the United Kingdom and in many countries Overseas. Each Club has its Leader, Secretary, Treasurer, and other officials all of whom, with the exception of the Leader, are boys. Write for information how to form a club, if there is no club near you.

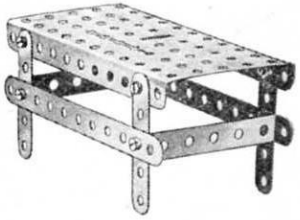
Special awards are given to Club members for good work in connection with their Club and medallions are awarded in connection with the Recruiting Campaign, full particulars of which will be sent on request.

MECCANO GUILD MEMBER'S CERTIFICATE

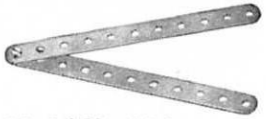
RECRUITING MEDALLION

SPECIAL MERIT MEDALLION

Model No. 00.1 Table

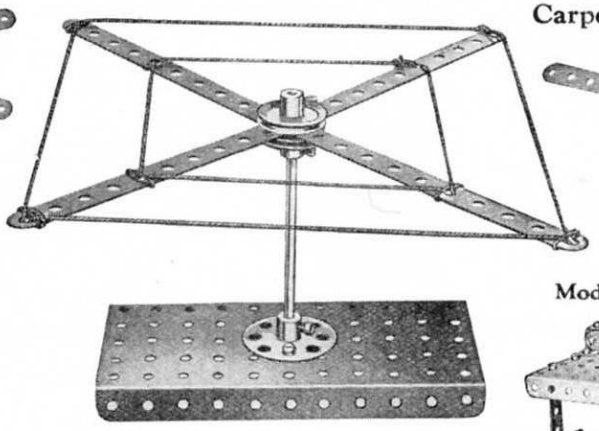


Model No. 00.2 Dividers

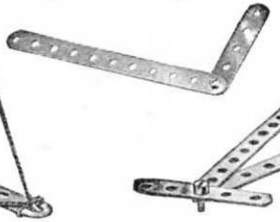


Model No. 00.3
Bench

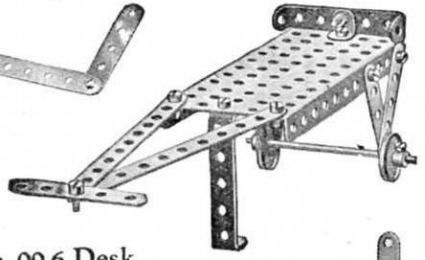
Model No. 00.4 Clothes Hanger



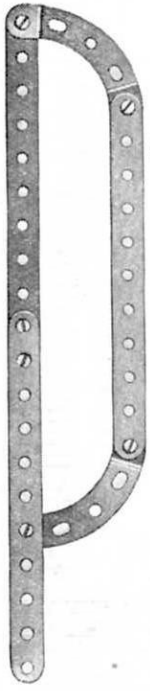
Model No. 00.5
Carpenter's Square



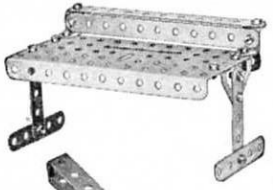
Model No. No. 00.7
Shipyard Bogie



Model No. 00.8
Meat Saw



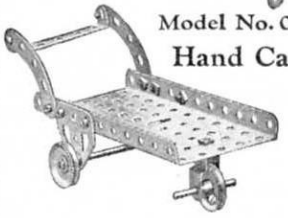
Model No. 00.6 Desk



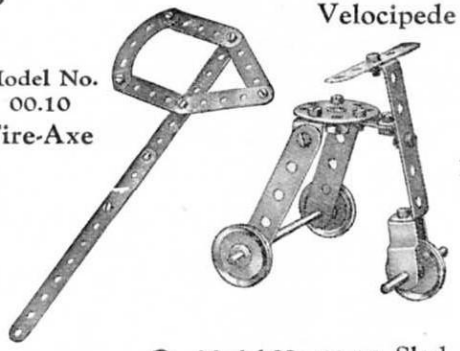
Model No.
00.15
Rifle with
Bayonet

Model No. 00.14
Farm Sight

Model No. 00.9
Hand Cart



Model No. 00.11
Velocipede

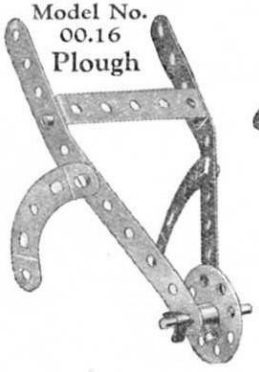


Model No.
00.10
Fire-Axe

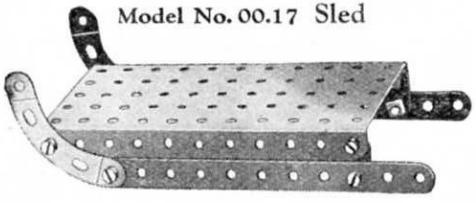
Model
No. 00.12
Ladder

Model No. 00.13
Trowel

Model No.
00.16
Plough

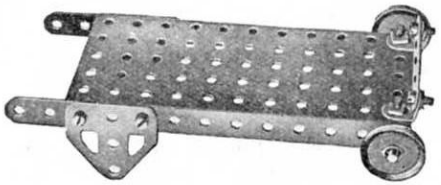


Model No. 00.17 Sled

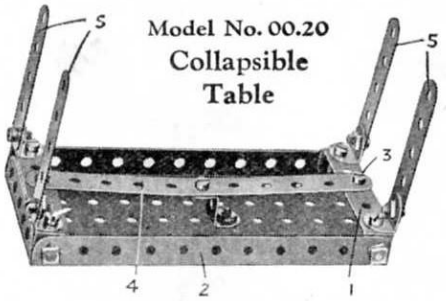


Model No. 00.18
Barrow

Model No. 00.19 Flat Truck

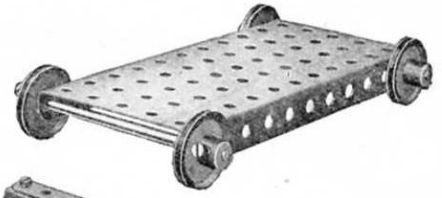


Model No. 00.20 Collapsible Table



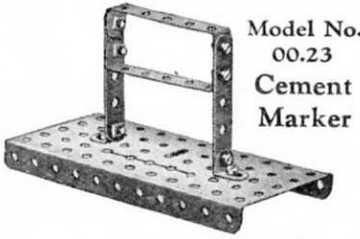
The $2\frac{1}{2}'' \times \frac{1}{2}''$ Double Angle Strips 1 are attached to the $5\frac{1}{2}'' \times 2\frac{1}{2}''$ Flanged Plate 2 by lock-nutted bolts, as in Standard Mechanism No. 263. The Bolts 3 are secured to the $5\frac{1}{2}''$ Strip 4 and their shanks engage with the centre holes in the $2\frac{1}{2}'' \times \frac{1}{2}''$ Double Angle Strips 1, thus maintaining the legs 5 in an upright position. When it is desired to fold up the legs 5, it is only necessary to raise the ends of the Strip 4, thus freeing the Double Angle Strips 1. The table is shown in the folded position in Fig. 00.20A.

Model No. 00.21 Trolley

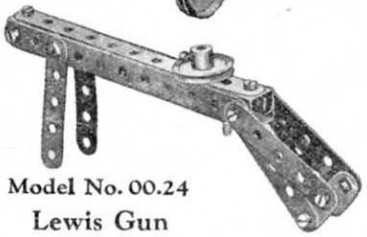


Model No. 00.22 Spade

Model No. 00.23 Cement Marker



Model No. 00.24 Lewis Gun



Model No. 00.25 Potato Chopper

Model No. 00.26 Motor Boat

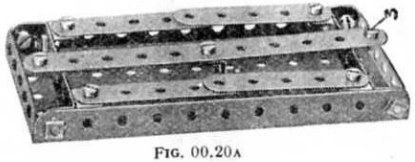
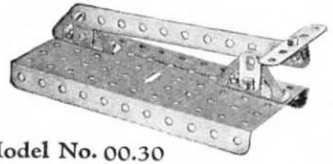


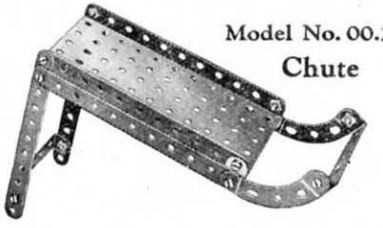
FIG. 00.20A

Model No. 00.31 Switch

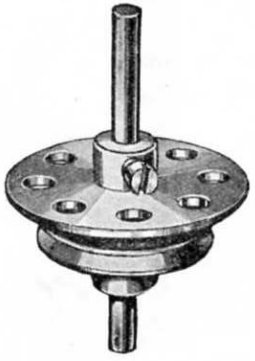


Model No. 00.27 Plasterer's Hawk

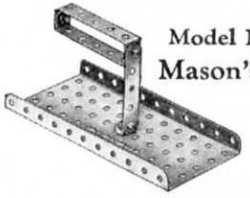
Model No. 00.28 Chute



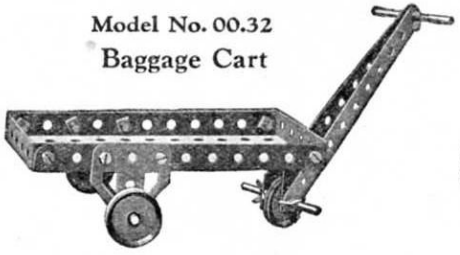
Model No. 00.29 Spinning Top



Model No. 00.30 Mason's Trowel



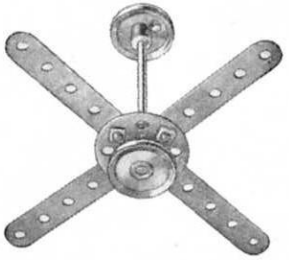
Model No. 00.32 Baggage Cart



Model No. 00.33
Friction Grip Tongs

Model No. 00.34 **Tweezers**

Model No. 00.35 **Ceiling Fan**



Model No. 00.36
Telegraph

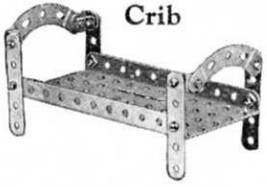
Model No. 00.37
Tin Opener

Model No. 00.38
Pen Rack

Model No. No. 00.39
Dividers

Model No. 00.40
Glider

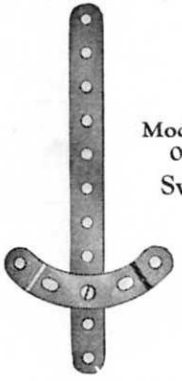
Model No. 00.41
Crib



Model No. 00.42
Telegraph Key

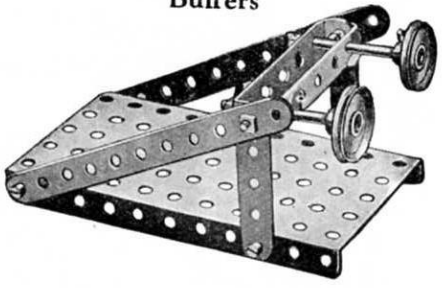
Model No. 00.43 **Book End**

Model No. 00.44
Sword



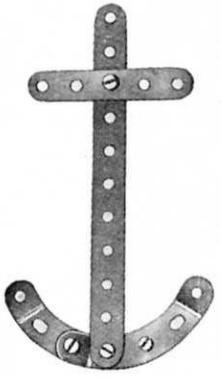
Model No. 00.45
Refreshment Wagon

Model No. 00.46
Buffers

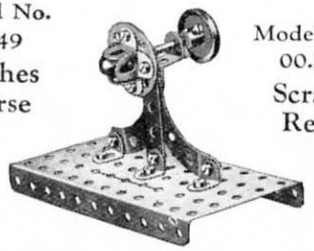


Model No. 00.47
Piano Stool

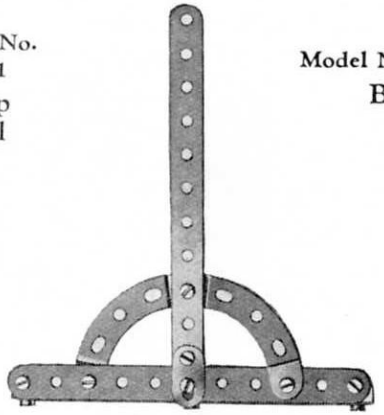
Model No. 00.48
Anchor



Model No. 00.49
Clothes Horse



Model No. 00.51
Scrap Reel



Model No. 00.52 Rake

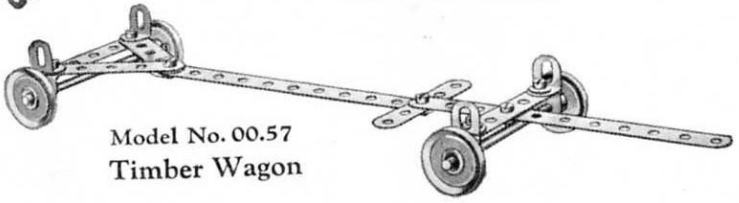
Model No. 00.53
Bed

Model No. 00.55
Step Ladder

Model No. 00.50
Rake

Model No. 00.54
Track Gauge

Model No. 00.56
Mail Bag Hanger

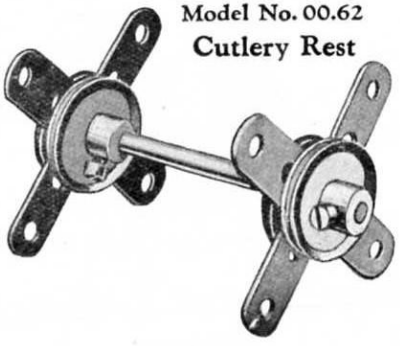


Model No. 00.57
Timber Wagon

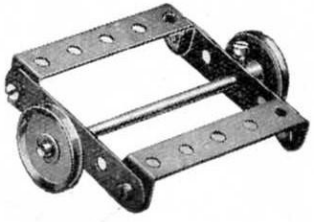
Model No. 00.58
Cheese Cutter

Model No. 00.59
Gravel Sifter

Model No. 00.61
Umbrella Stand

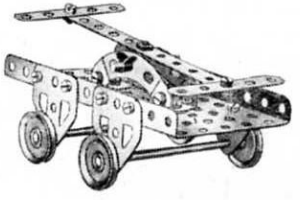


Model No. 00.62
Cutlery Rest



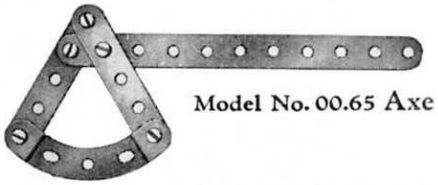
Model No. 00.60 Trolley

Model No. 00.63
Birdcage and Stand



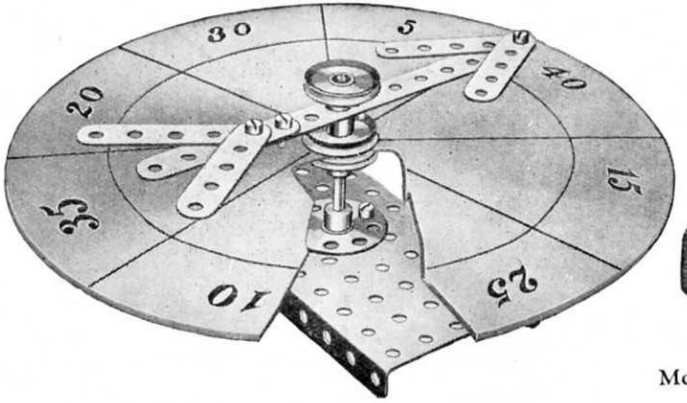
Model No. 00.64
Hand Car

These Models can be built with MECCANO Outfit No. 00



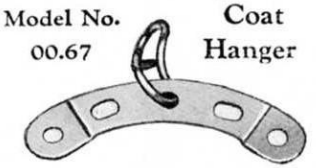
Model No. 00.65 Axe

Model No. 00.66 Roulette Wheel

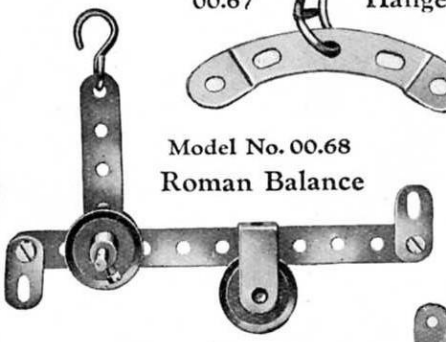


Cut out a circular piece of cardboard, and mark as shown to form scoring board. This is clamped between two 1" pulley wheels. The pointer revolves freely on the upright spindle and is held in position by another 1" pulley wheel.

Model No. 00.67 Coat Hanger



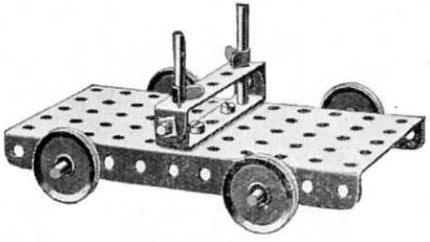
Model No. 00.68 Roman Balance



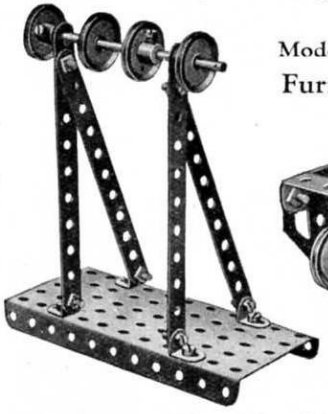
Model No. 00.69 Fork

Model No. 00.70 Horse

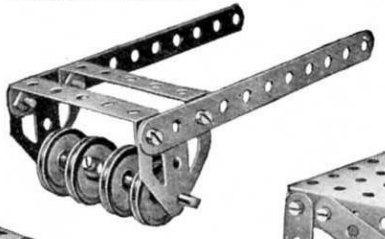
Model No. 00.71 Timber Truck



Model No. 00.72 Pulley Shafting

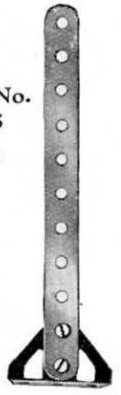


Model No. 00.73 Furrow Roller

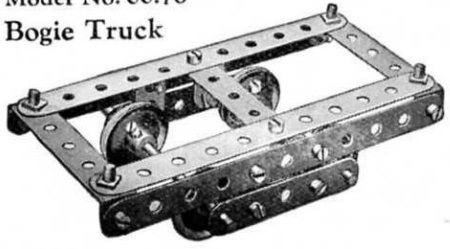


Model No. 00.74 Grill

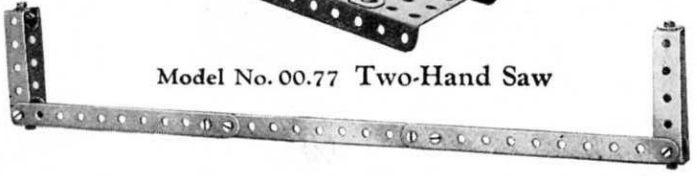
Model No. 00.75 Hoe



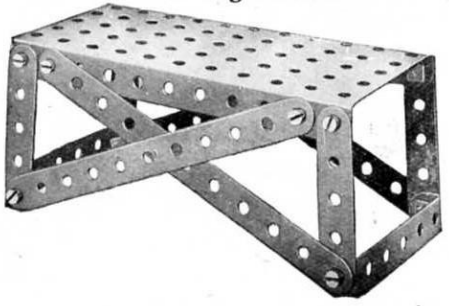
Model No. 00.76 Bogie Truck



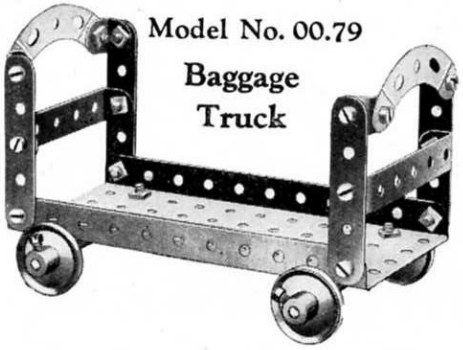
Model No. 00.77 Two-Hand Saw



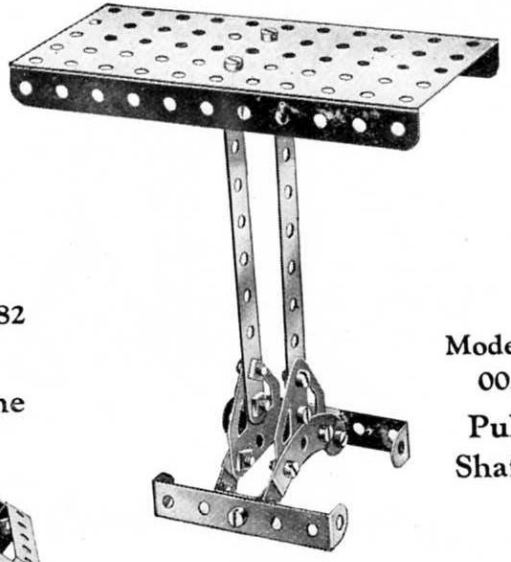
Model No. 00.78 Planing Bench



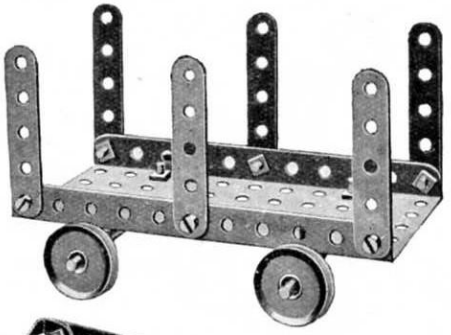
Model No. 00.79
Baggage Truck



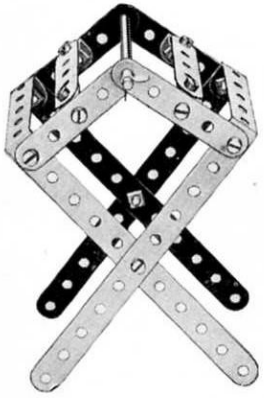
Model No. 00.80 Table



Model No. 00.81 Timber Truck

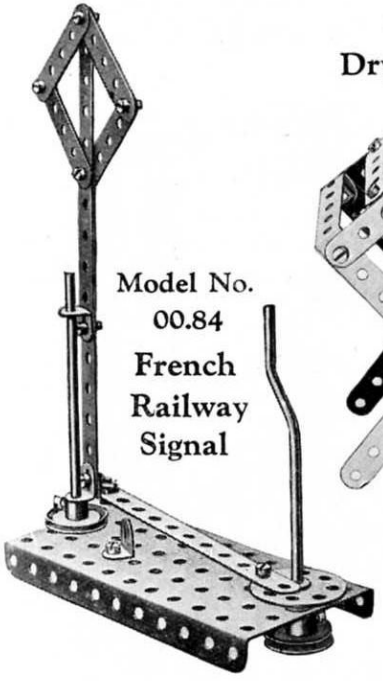


Model No. 00.82
Clothes Drying Frame

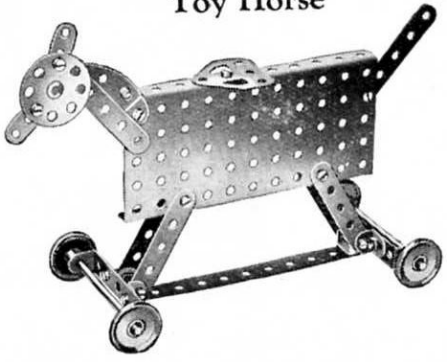


Model No. 00.83
Pulley Shafting

Model No. 00.84
French Railway Signal

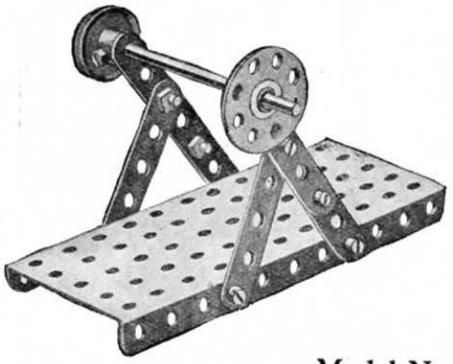


Model No. 00.85
Toy Horse

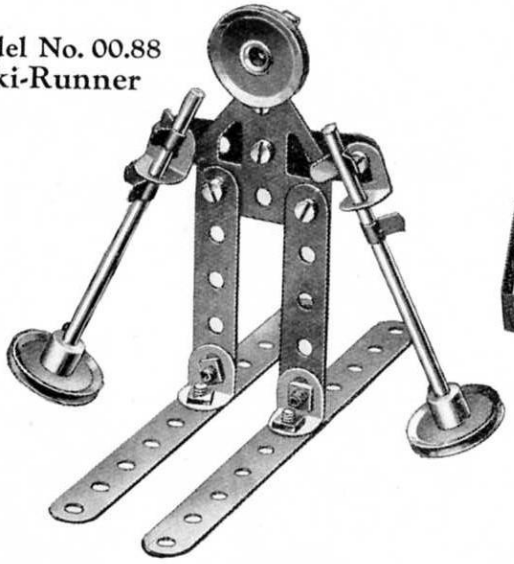


Model No. 00.86
Mail Bag Hanger

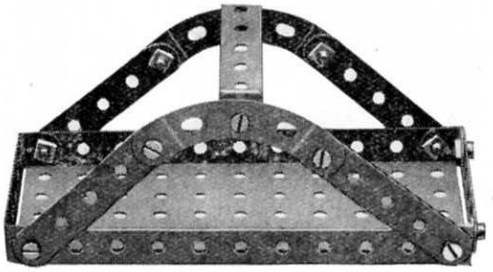
Model No. 00.87 **Buffing Spindle**



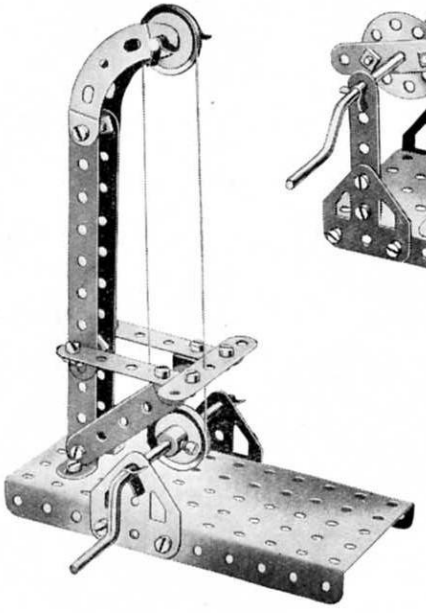
Model No. 00.88
Ski-Runner



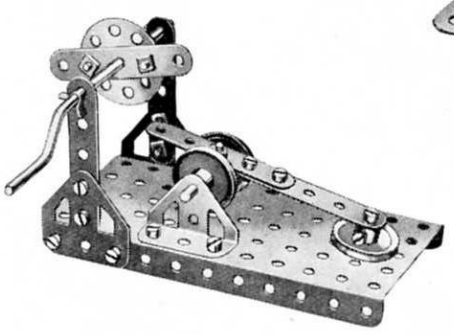
Model No. 00.89 **Cutlery Basket**



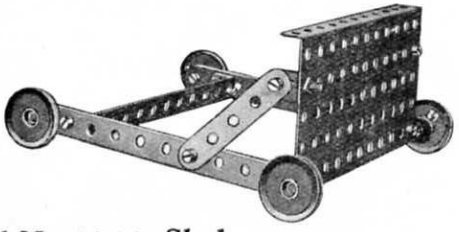
Model No. 00.92
Band Saw



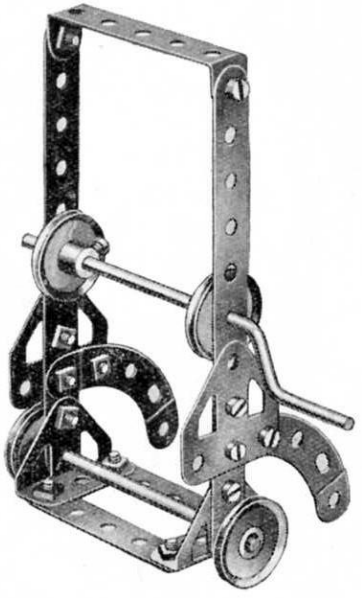
Model No. 00.90
Trip Hammer



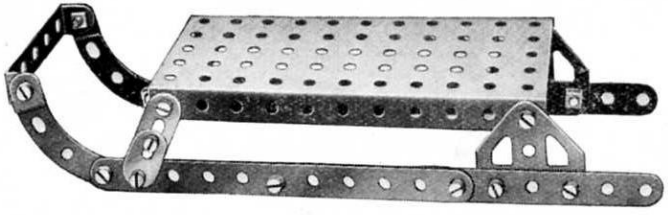
Model No. 00.91 **Devil Wall**



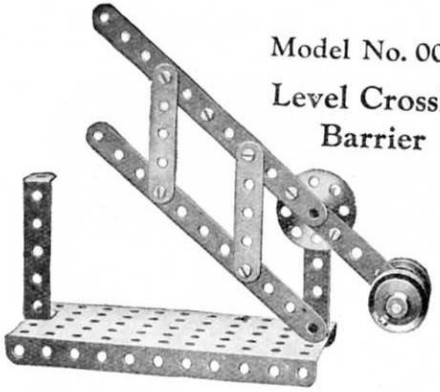
Model No. 00.94
Garden Hose Reel



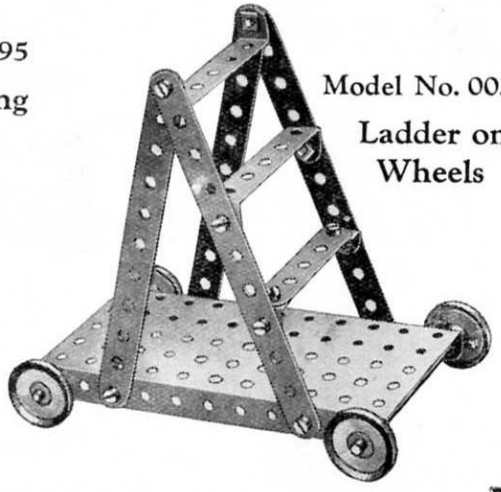
Model No. 00.93 **Sled**



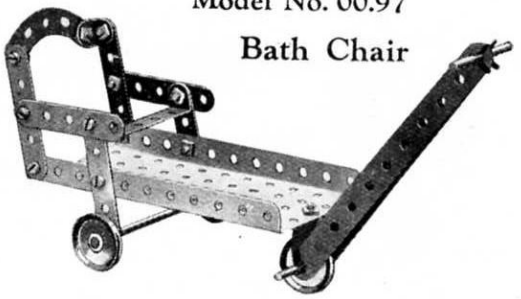
Model No. 00.95
Level Crossing Barrier



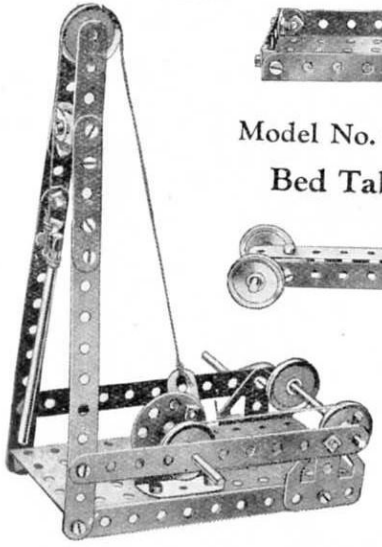
Model No. 00.96
Ladder on Wheels



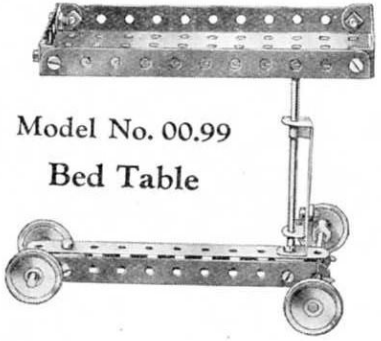
Model No. 00.97
Bath Chair



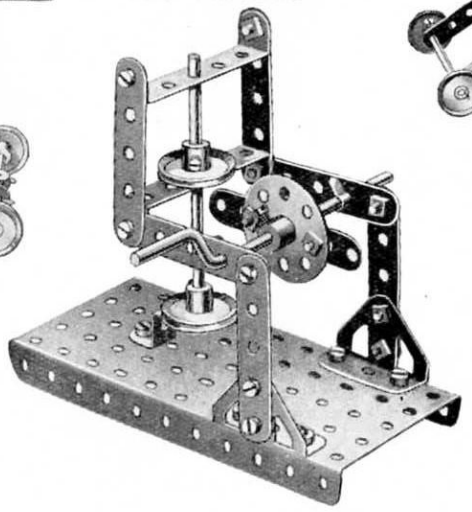
Model No. 00.98
Well Driller



Model No. 00.99
Bed Table

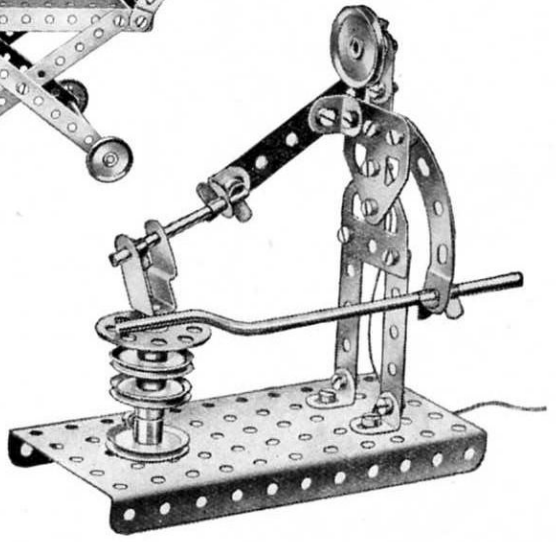


Model No. 00.100
Ore Crusher

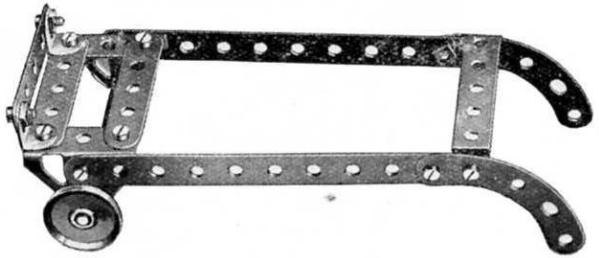


Model No. 00.101
Tea Wagon

Model No. 00.102
Blacksmith

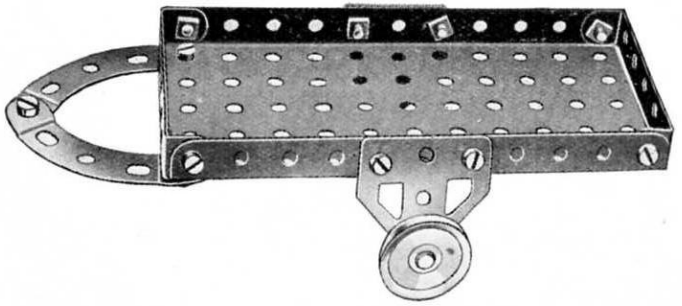


Model No. 00.103 Porter's Trolley

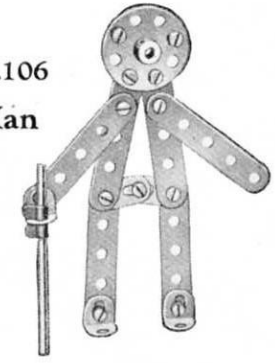


Model No. 00.104
Watch Stand

Model No. 00.105 Hand Truck

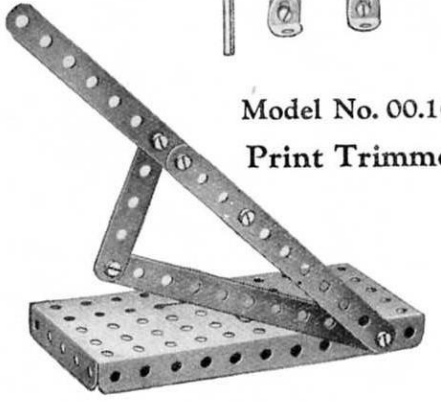


Model No. 00.106
Meccano Man

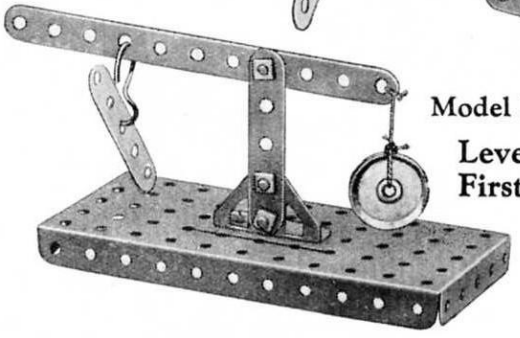


Model No. 00.107
Battle Axe

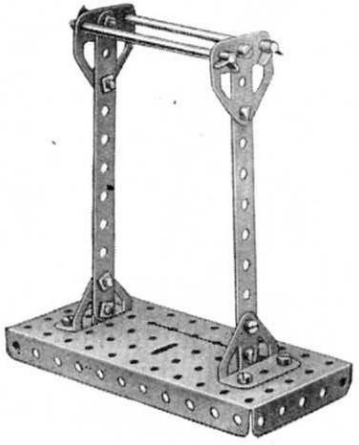
Model No. 00.108
Print Trimmer



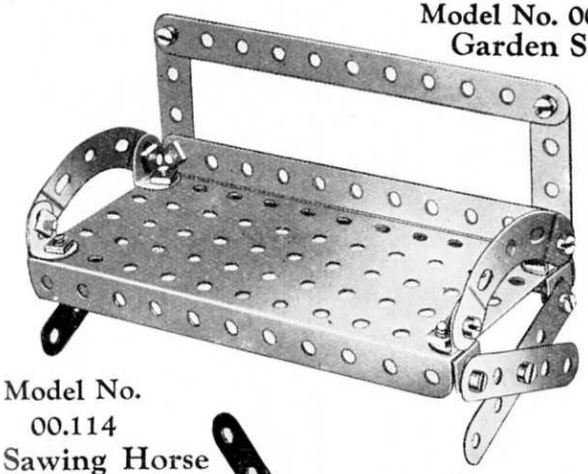
Model No. 00.109
Lever of the First Order



Model No. 00.110
Towel Horse

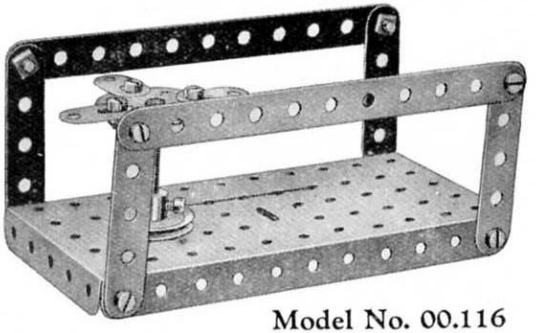


Model No. 00.111
Garden Seat



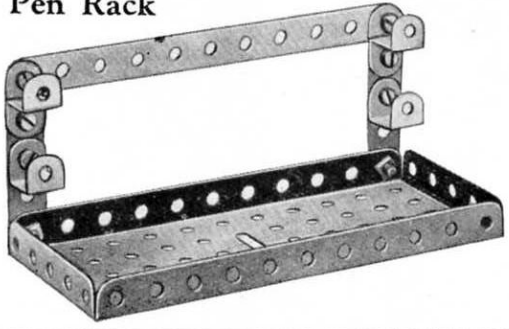
Model No. 00.112
Elevator Car

Model No. 00.113 Turnstile

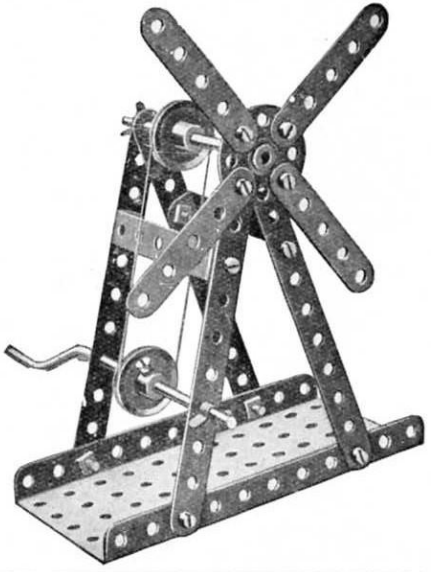


Model No. 00.114
Sawing Horse

Model No. 00.115
Pen Rack



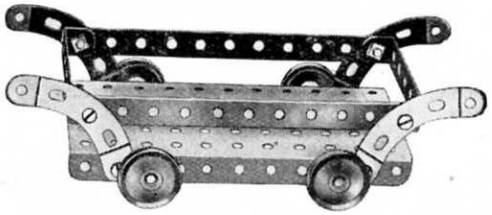
Model No. 00.116
Windmill



HOW TO CONTINUE

This completes our examples of models that may be made with MECCANO Outfit No. 00. 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. 00A Accessory Outfit, the price of which will be found in the list at the end of this Manual.

Model No. 0.1 Trolley



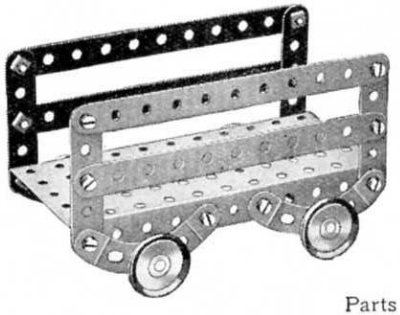
Parts required:

2 of No.	2	8 of No.	37
2 „ „	16	2 „ „	48A
4 „ „	22	1 „ „	52
4 of No.	90A		

Model No. 0.2 Luggage Truck

Parts required:

4 of No.	2
4 „ „	5
2 „ „	16
4 „ „	22
16 „ „	37
1 „ „	52
4 „ „	90A



Model No. 0.3 Swing

Parts required:

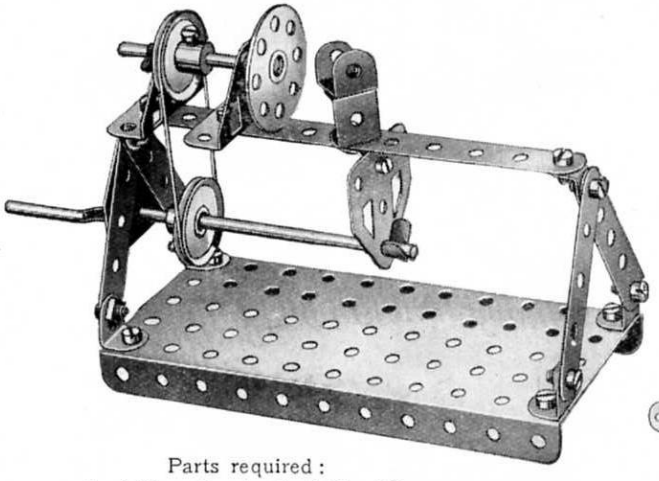
4 of No.	2
7 „ „	5
2 „ „	10
4 „ „	12
21 „ „	37
1 „ „	40
2 „ „	48A
1 „ „	52
2 „ „	90A
2 „ „	126

Model No. 0.4 Hat Rack

Parts required:

2 of No.	2
4 „ „	5
2 „ „	11
5 „ „	12
1 „ „	17
1 „ „	22
22 „ „	37
2 „ „	48A
4 „ „	90A
2 „ „	126A

Model No. 0.5 Lathe



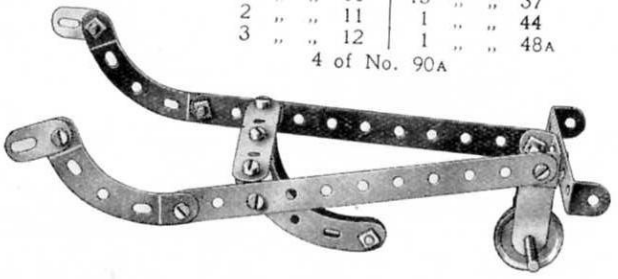
Parts required:

1 of No.	2	2 of No.	22
4 „ „	5	1 „ „	24
2 „ „	11	3 „ „	35
7 „ „	12	16 „ „	37
1 „ „	17	1 „ „	52
1 „ „	19s	2 „ „	126
2 of No.	126A		

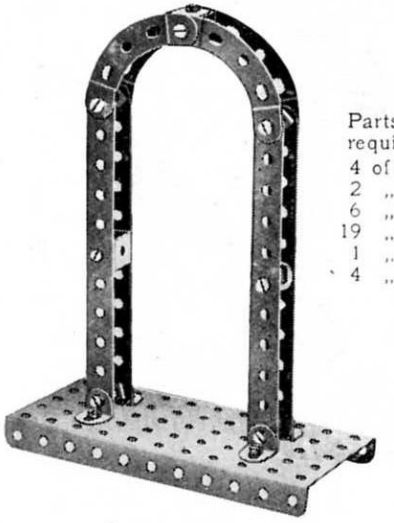
Model No. 0.6 Plough

Parts required:

2 of No.	2	1 of No.	17
1 „ „	5	1 „ „	22
2 „ „	10	15 „ „	37
2 „ „	11	1 „ „	44
3 „ „	12	1 „ „	48A
4 of No.	90A		



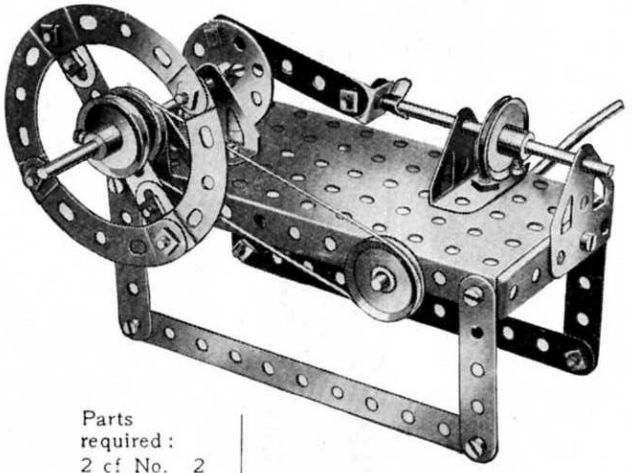
Model No. 0.7 Arch



Parts required :

4	of No.	2
2	„ „	11
6	„ „	12
19	„ „	37
1	„ „	52
4	„ „	90A

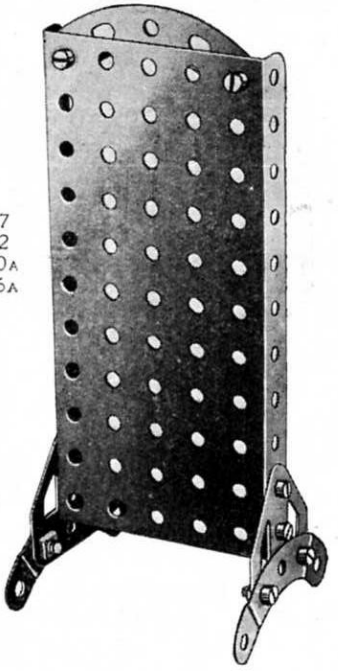
Model No. 0.8 Horizontal Engine



Parts required :

2	of No.	2
6	„ „	5
2	„ „	10
1	„ „	12
2	„ „	16
1	„ „	19s
4	of No.	22
1	„ „	24
3	„ „	35
21	„ „	37
1	„ „	48A
1	of No.	52
4	„ „	90A
2	„ „	126
2	„ „	126A

Model No. 0.9 Notice Board



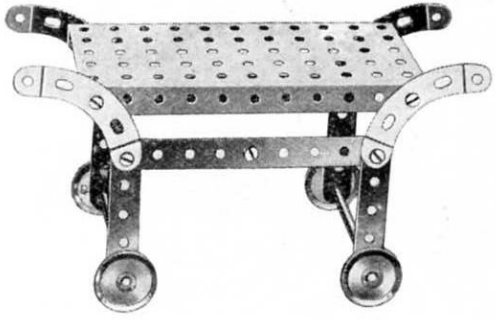
Parts required :

10	of No.	37
1	„ „	52
3	„ „	90A
2	„ „	126A

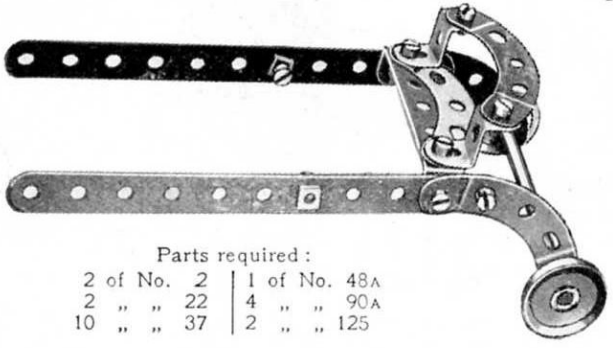
Model No. 0.10 Tea Wagon

Parts required :

8	of No.	5
2	„ „	16
4	„ „	22
10	of No.	37
1	„ „	52
4	„ „	90A



Model No. 0.11 Sulkey



Parts required :

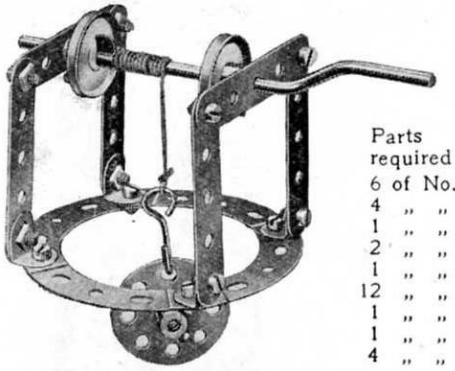
2	of No.	2
2	„ „	22
10	„ „	37
1	of No.	48A
4	„ „	90A
2	„ „	125

Model No. 0.12 Drafting Table

Parts required :

4	of No.	5
12	„ „	37
1	„ „	48A
1	of No.	52
4	„ „	90A
2	„ „	126A

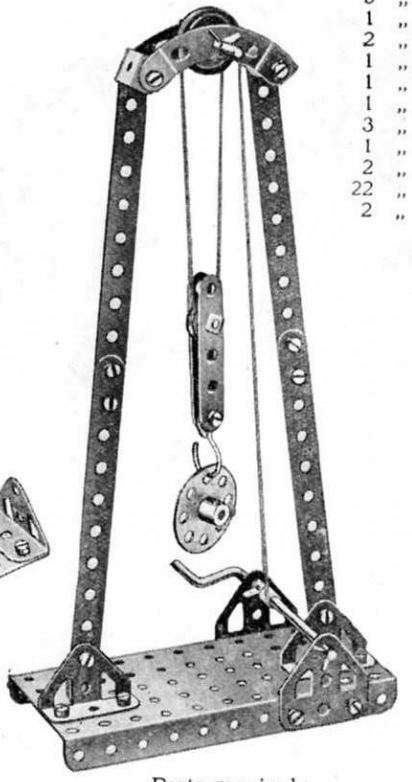
Model No. 0.13 Well Windlass



Parts required:

6	of No.	5
4	„ „	12
1	„ „	19s
2	„ „	22
1	„ „	24
12	„ „	37
1	„ „	40
1	„ „	57
4	„ „	90A

Model No. 0.14 Pulley Block



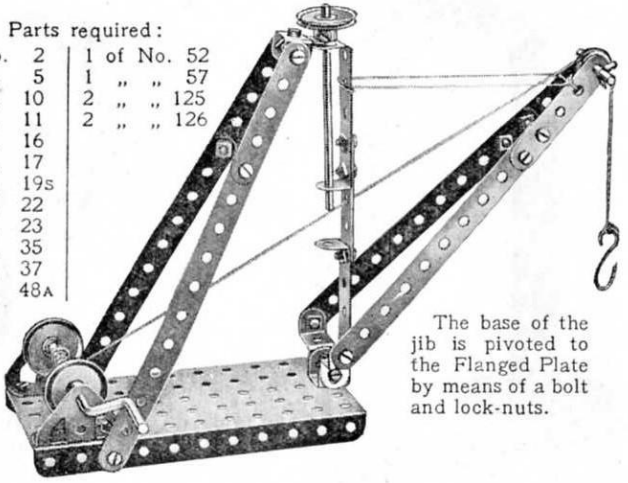
Parts required:

4	of No.	2	1	of No.	22	1	of No.	52
2	„ „	5	1	„ „	23	1	„ „	57
2	„ „	11	1	„ „	24	2	„ „	90A
1	„ „	17	5	„ „	35	2	„ „	126
1	„ „	19s	20	„ „	37	2	„ „	126A

Model No. 0.15 Derricking Crane

Parts required:

4	of No.	2	1	of No.	52
5	„ „	5	1	„ „	57
1	„ „	10	2	„ „	125
2	„ „	11	2	„ „	126
1	„ „	16			
1	„ „	17			
1	„ „	19s			
3	„ „	22			
1	„ „	23			
2	„ „	35			
22	„ „	37			
2	„ „	48A			

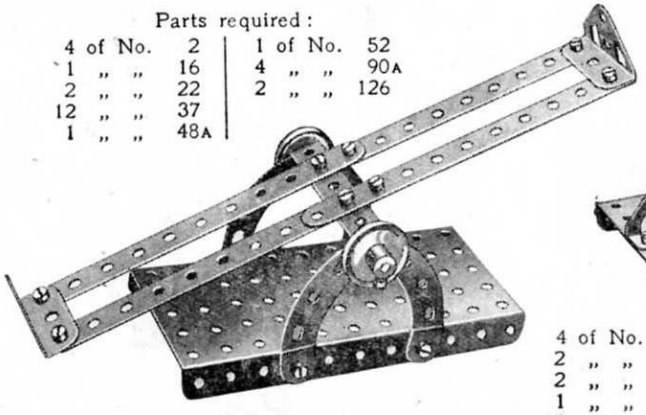


The base of the jib is pivoted to the Flanged Plate by means of a bolt and lock-nuts.

Model No. 0.16 See-Saw

Parts required:

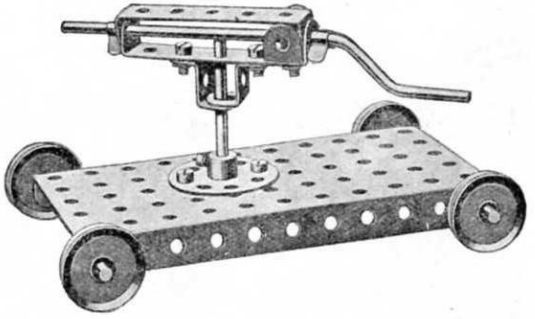
4	of No.	2	1	of No.	52
1	„ „	16	4	„ „	90A
2	„ „	22	2	„ „	126
12	„ „	37			
1	„ „	48A			



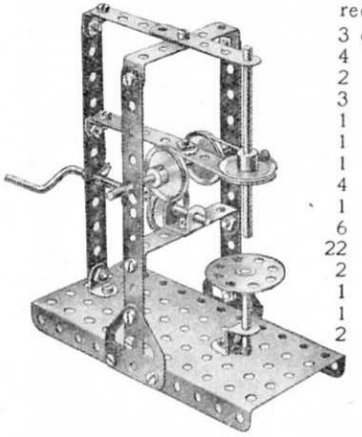
Model No. 0.17 Rock Drill

Parts required:

1	of No.	11	4	of No.	22	2	of No.	48A
2	„ „	16	1	„ „	24	1	„ „	52
1	„ „	17	2	„ „	35	2	„ „	125
1	„ „	19s	5	„ „	37			



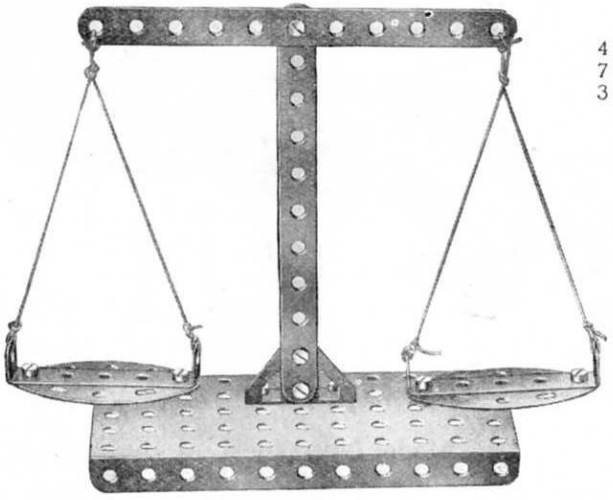
Model No. 0.18 Drilling Machine



Parts required:

3	of No.	2	
4	„ „	5	
2	„ „	11	
3	„ „	12	
1	„ „	16	
1	„ „	17	
1	„ „	19s	
4	„ „	22	
1	„ „	24	
6	„ „	35	
22	„ „	37	
2	„ „	48A	
1	„ „	52	
1	„ „	125	
2	„ „	126A	

Model No. 0.19 Scales



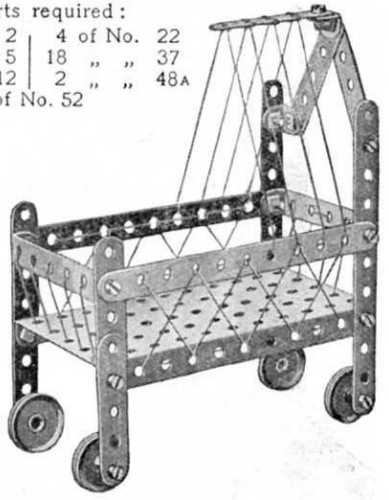
Parts required:

2	of No.	2	2	of No.	48A
9	„ „	37	1	„ „	52
1	„ „	37A	4	„ „	90A
	1 of No.	126			

Model No. 0.20 Cot

Parts required:

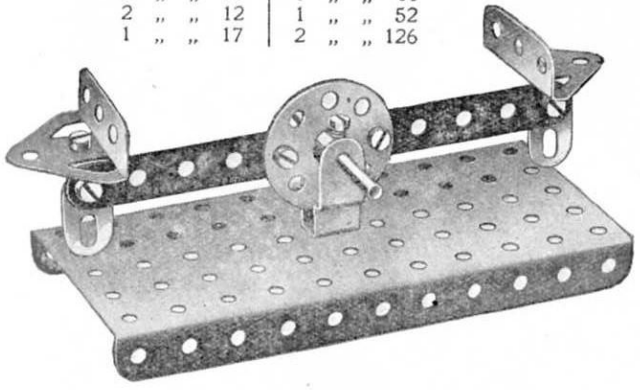
4	of No.	2	4	of No.	22
7	„ „	5	18	„ „	37
3	„ „	12	2	„ „	48A
	1 of No.	52			



Model No. 0.21 Counter Scales

Parts required:

1	of No.	2	7	of No.	37
2	„ „	10	1	„ „	44
2	„ „	12	1	„ „	52
1	„ „	17	2	„ „	126



Model No. 0.22 Single Sheave Pulley Block

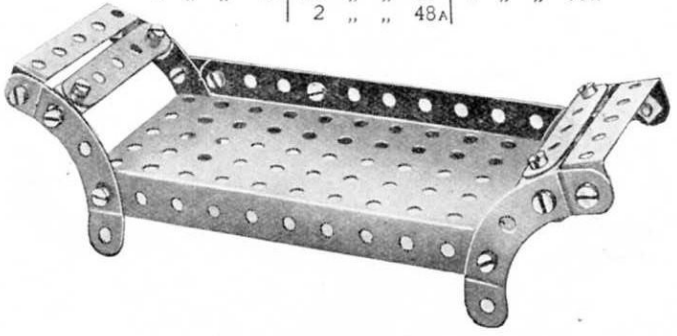
Parts required

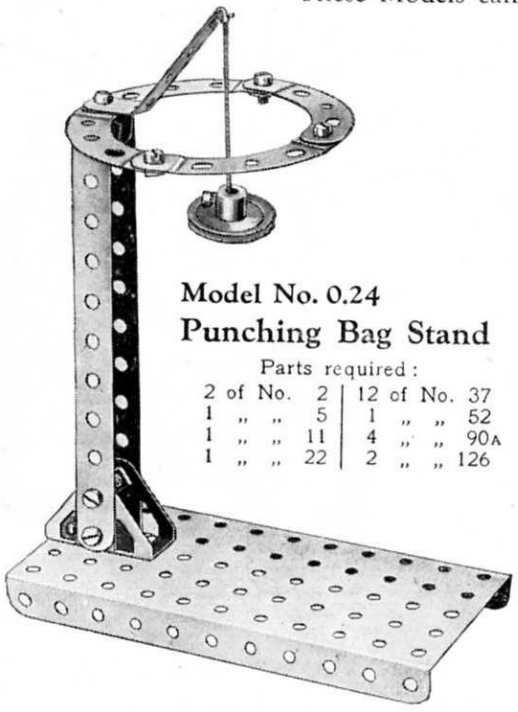
1	of No.	23	
12	„ „	37A	
1	„ „	57	
4	„ „	111c	
2	„ „	126A	

Model No. 0.23 Couch

Parts required:

1	of No.	2	4	of No.	12
3	„ „	5	20	„ „	37
			2	„ „	48A
			1	of No.	52
			4	„ „	90A



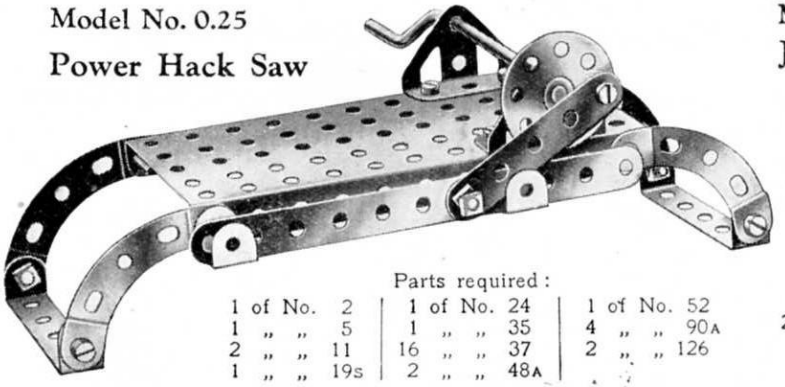


Model No. 0.24
Punching Bag Stand

Parts required :

2 of No.	2	12 of No.	37
1 „ „	5	1 „ „	52
1 „ „	11	4 „ „	90A
1 „ „	22	2 „ „	126

Model No. 0.25
Power Hack Saw



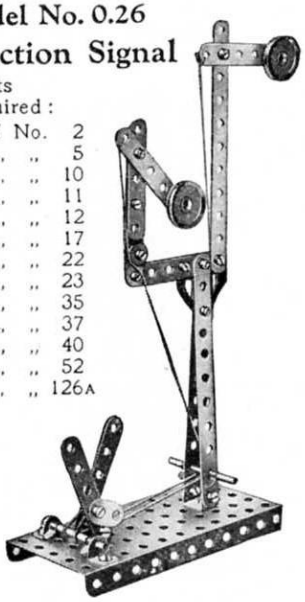
Parts required :

1 of No.	2	1 of No.	24	1 of No.	52
1 „ „	5	1 „ „	35	4 „ „	90A
2 „ „	11	16 „ „	37	2 „ „	126
1 „ „	19s	2 „ „	48A		

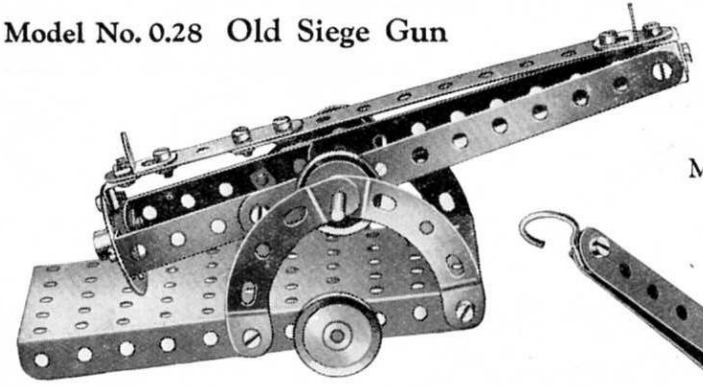
Model No. 0.26
Junction Signal

Parts required :

3 of No.	2
7 „ „	5
2 „ „	10
2 „ „	11
2 „ „	12
2 „ „	17
2 „ „	22
1 „ „	23
4 „ „	35
21 „ „	37
1 „ „	40
1 „ „	52
1 „ „	126A



Model No. 0.28 Old Siege Gun



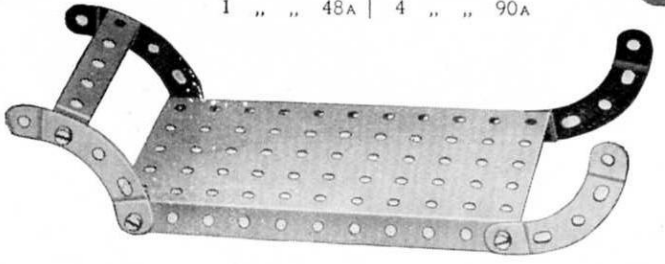
Parts required :

3 of No.	2	1 of No.	24
1 „ „	5	18 „ „	37
2 „ „	11	2 „ „	48A
4 „ „	12	1 „ „	52
2 „ „	16	4 „ „	90A
4 „ „	22		

Model No. 0.27 Sled

Parts required :

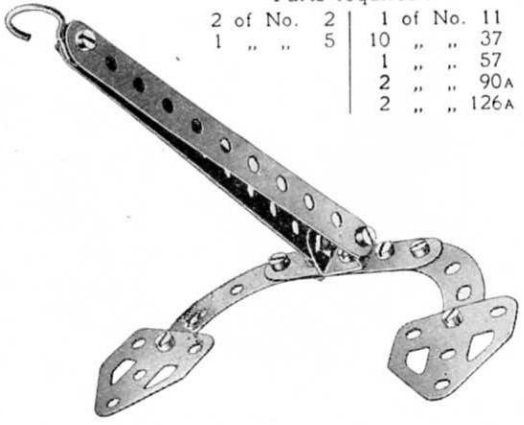
6 of No.	37	1 of No.	52
1 „ „	48A	4 „ „	90A



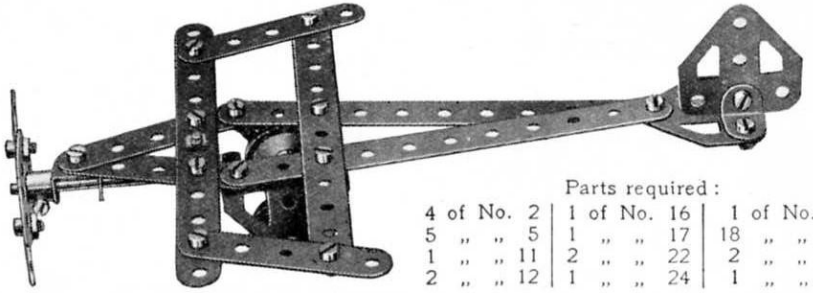
Model No. 0.29 Anchor

Parts required :

2 of No.	2	1 of No.	11
1 „ „	5	10 „ „	37
		1 „ „	57
		2 „ „	90A
		2 „ „	126A



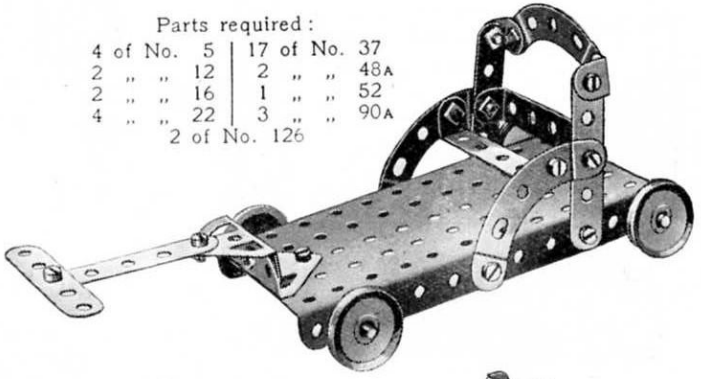
Model No. 0.30 Aeroplane



Parts required :

4 of No.	2	1 of No.	16	1 of No.	35
5 „ „	5	1 „ „	17	18 „ „	37
1 „ „	11	2 „ „	22	2 „ „	126
2 „ „	12	1 „ „	24	1 „ „	126A

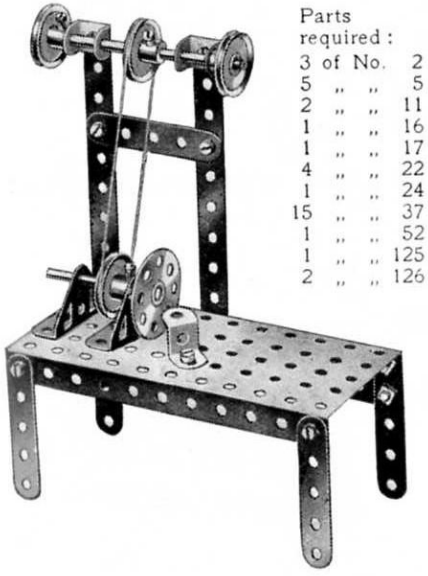
Model No. 0.31 Bath Chair



Parts required :

4 of No.	5	17 of No.	37
2 „ „	12	2 „ „	48A
2 „ „	16	1 „ „	52
4 „ „	22	3 „ „	90A
2 of No.	126		

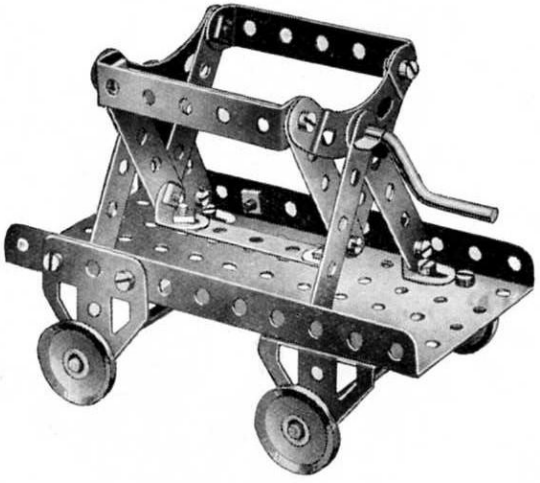
Model No. 0.32 Bench Lathe



Parts required :

3 of No.	2
5 „ „	5
2 „ „	11
1 „ „	16
1 „ „	17
4 „ „	22
1 „ „	24
15 „ „	37
1 „ „	52
1 „ „	125
2 „ „	126

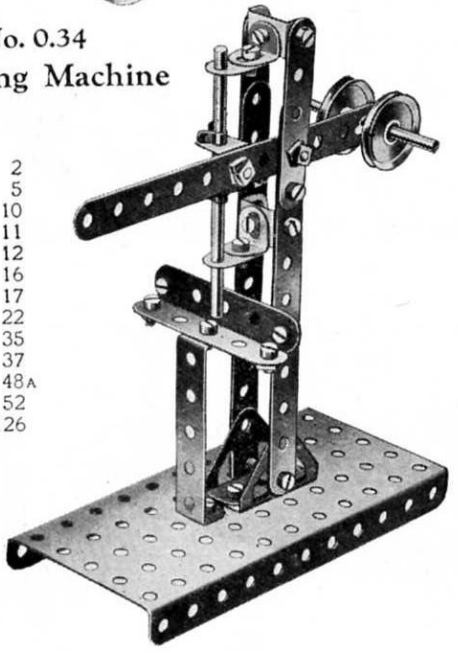
Model No. 0.33 Dump Car



Parts required :

9 of No.	5	2 of No.	35	2 of No.	90A
6 „ „	12	22 „ „	37	2 „ „	126
1 „ „	19S	2 „ „	48A	2 „ „	126A
4 „ „	22	1 „ „	52		

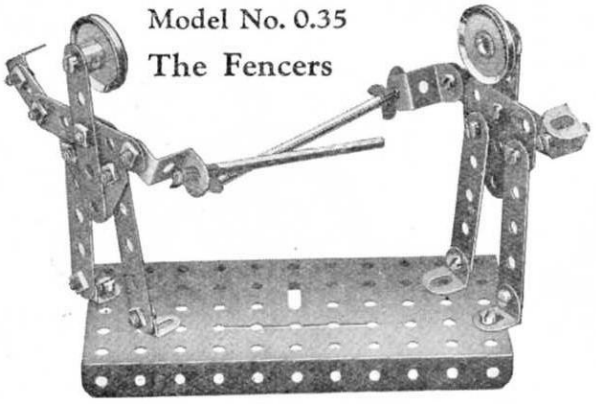
Model No. 0.34 Punching Machine



Parts required :

3 of No.	2
4 „ „	5
2 „ „	10
2 „ „	11
4 „ „	12
1 „ „	16
1 „ „	17
2 „ „	22
2 „ „	35
22 „ „	37
1 „ „	48A
1 „ „	52
2 „ „	126

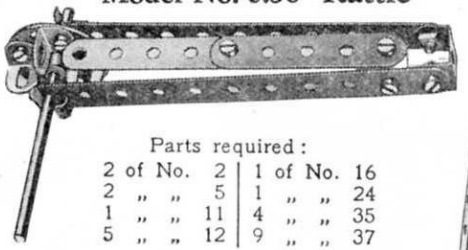
Model No. 0.35 The Fencers



Parts required :

8 of No.	5	4 of No.	35
2 „ „	10	20 „ „	37
6 „ „	12	1 „ „	52
2 „ „	16	2 „ „	125
2 „ „	22	2 „ „	126A

Model No. 0.36 Rattle



Parts required :

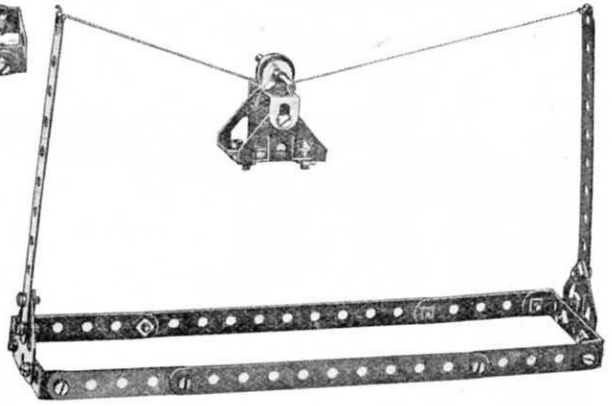
2 of No.	2	1 of No.	16
2 „ „	5	1 „ „	24
1 „ „	11	4 „ „	35
5 „ „	12	9 „ „	37

Model No. 0.37 Single Sheave Pulley Block

Parts required :

2 of No.	5	7 of No.	37A
1 „ „	23	1 „ „	57
3 of No.	111c		

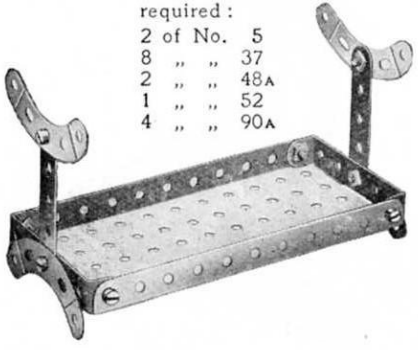
Model No. 0.38 Aerial Ropeway



Parts required :

4 of No.	2	1 of No.	23	2 of No.	48A
4 „ „	5	2 „ „	35	2 „ „	125
2 „ „	10	22 „ „	37	2 „ „	126
1 „ „	17	1 „ „	40	2 „ „	126A

Model No. 0.39 Pen Rack



Parts required :

2 of No.	5
8 „ „	37
2 „ „	48A
1 „ „	52
4 „ „	90A

Model No. 0.40 Music Stand

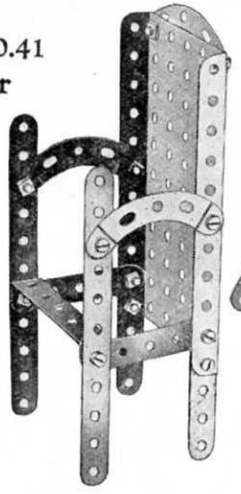
Parts required :

1 of No.	2
9 „ „	5
3 „ „	12
12 „ „	37
2 „ „	48A
1 „ „	126

Model No. 0.41 Arm Chair

Parts required :

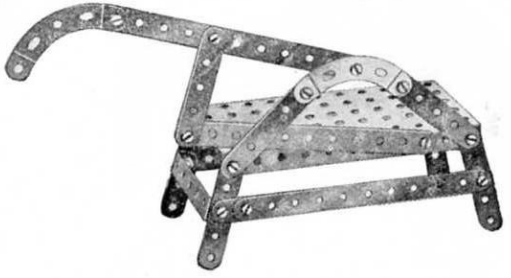
2 of No.	2
4 „ „	5
12 „ „	37
1 „ „	48A
1 „ „	52
3 „ „	90A



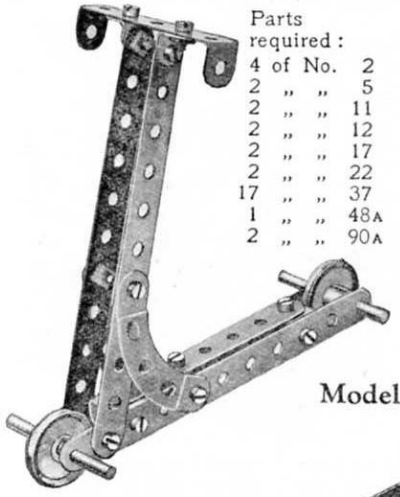
Model No. 0.42 Shearing Machine

Parts required :

4 of No.	2	2 of No.	48A
7 „ „	5	1 „ „	52
17 „ „	37	2 „ „	90A



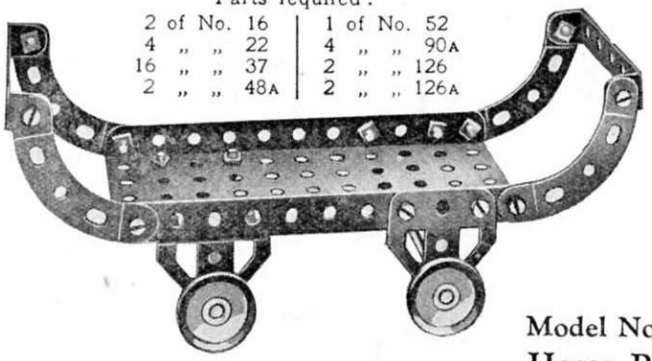
Model No. 0.43 Scooter



Parts required :

4 of No.	2
2 „ „	5
2 „ „	11
2 „ „	12
2 „ „	17
2 „ „	22
17 „ „	37
1 „ „	48A
2 „ „	90A

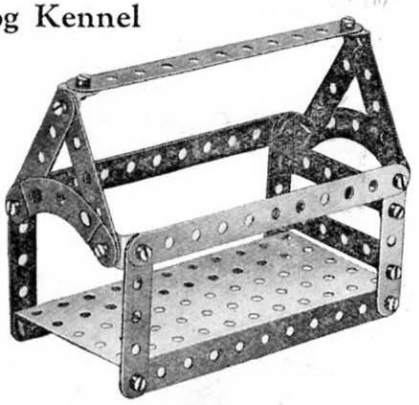
Model No. 0.44 Push Cart



Parts required :

2 of No.	16	1 of No.	52
4 „ „	22	4 „ „	90A
16 „ „	37	2 „ „	126
2 „ „	48A	2 „ „	126A

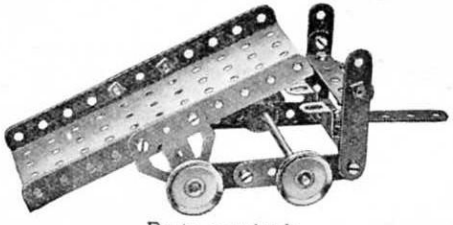
Model No. 0.45 Dog Kennel



Parts required :

3 of No.	2
8 „ „	5
6 „ „	12
20 „ „	37
2 „ „	48A
1 „ „	52
2 „ „	90A

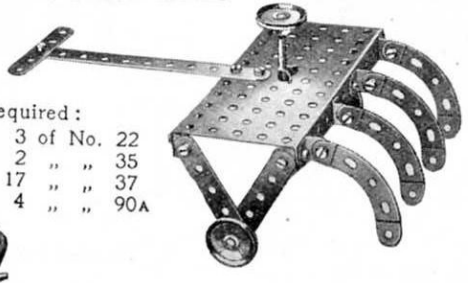
Model No. 0.46 Tipping Cart



Parts required :

7 of No.	5	15 of No.	37	1 of No.	90A
2 „ „	16	2 „ „	48A	2 „ „	125
4 „ „	22	1 „ „	52	2 „ „	126A

Model No. 0.47 Horse Rake



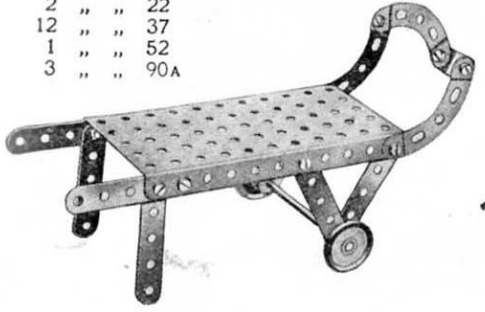
Parts required :

1 of No.	2	3 of No.	22
5 „ „	5	2 „ „	35
8 „ „	12	17 „ „	37
1 „ „	17	4 „ „	90A

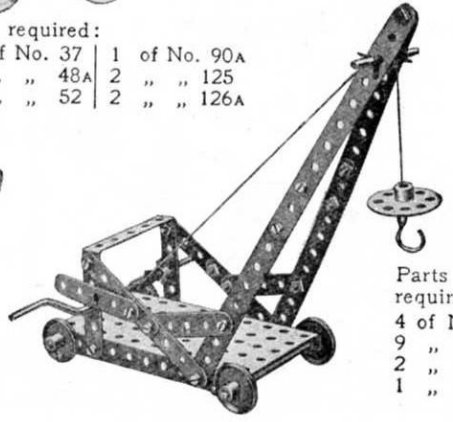
Model No. 0.48 Luggage Truck

Parts required :

2 of No.	2
6 „ „	5
2 „ „	12
1 „ „	16
2 „ „	22
12 „ „	37
1 „ „	52
3 „ „	90A



Model No. 0.49 Jib Crane



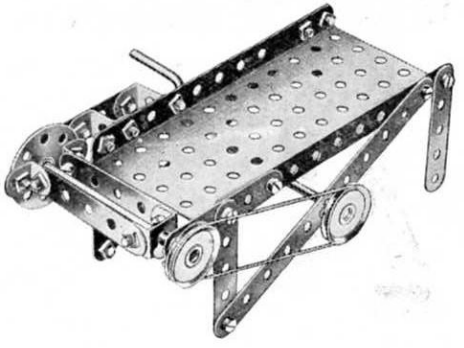
Parts required :

4 of No.	2	1 of No.	19s
9 „ „	5	4 „ „	22
2 „ „	16	1 „ „	23
1 „ „	17	1 „ „	24
		4 „ „	35
		17 „ „	37
		1 „ „	40
		1 „ „	48A
		1 „ „	52
		1 „ „	57

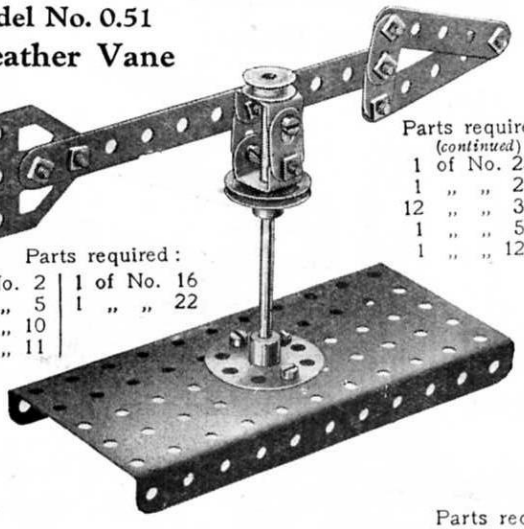
Model No. 0.50 Chaff Cutter

Parts required :

2 of No.	2	2 of No.	22
8 „ „	5	1 „ „	24
1 „ „	11	2 „ „	35
2 „ „	12	19 „ „	37
1 „ „	16	1 „ „	52
1 „ „	19s	2 „ „	125



Model No. 0.51 Weather Vane



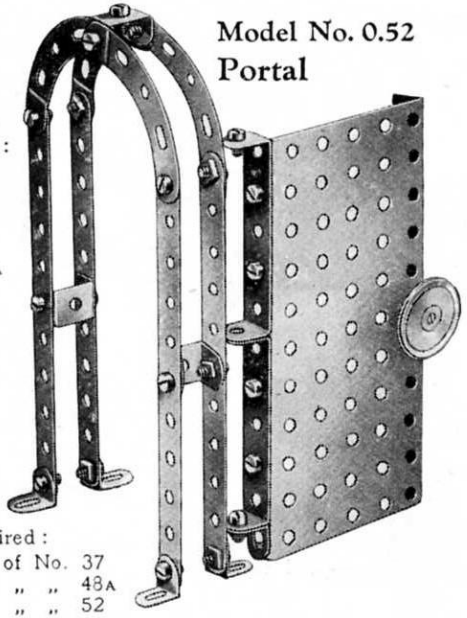
Parts required :

1 of No.	2	1 of No.	16
2 „ „	5	1 „ „	22
4 „ „	10		
2 „ „	11		

Parts required : (*continued*)

1 of No.	23		
1 „ „	24		
12 „ „	37		
1 „ „	52		
1 „ „	126A		

Model No. 0.52 Portal



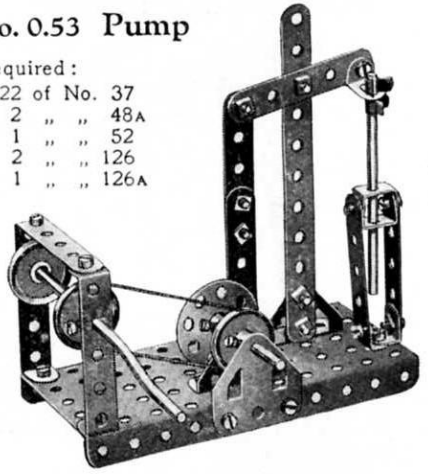
Parts required :

4 of No.	2	22 of No.	37
2 „ „	11	2 „ „	48A
8 „ „	12	1 „ „	52
1 „ „	22	4 „ „	90A

Model No. 0.53 Pump

Parts required :

1 of No.	2	22 of No.	37
6 „ „	5	2 „ „	48A
2 „ „	11	1 „ „	52
3 „ „	12	2 „ „	126
1 „ „	16	1 „ „	126A
1 „ „	17		
1 „ „	19S		
3 „ „	22		
1 „ „	24		
2 „ „	35		



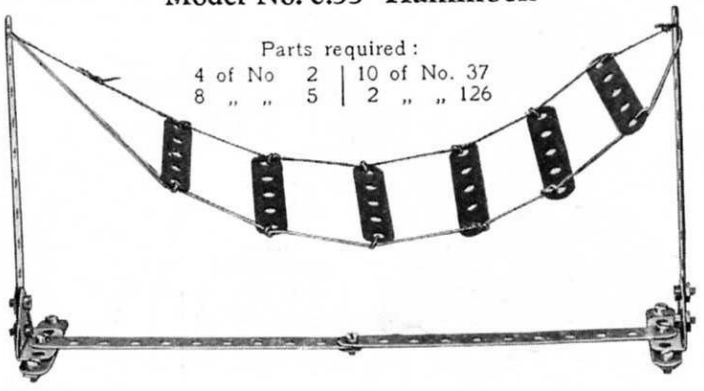
The connecting Strip is pivoted by bolts and nuts at one end to the Bush Wheel and at the other end to the cross beam. The latter is pivoted by the same means to the upright.

Model No. 0.54 Walking Man

Parts required :

5 of No.	5	
3 „ „	10	
2 „ „	12	
1 „ „	22	
7 „ „	37	
3 „ „	90A	

Model No. 0.55 Hammock



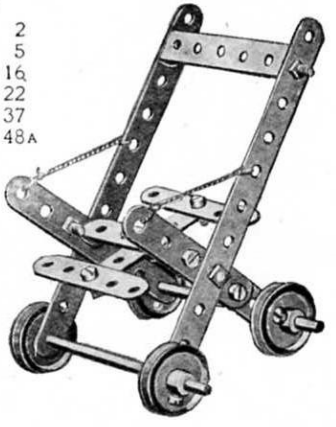
Parts required :

4 of No	2	10 of No.	37
8 „ „	5	2 „ „	126

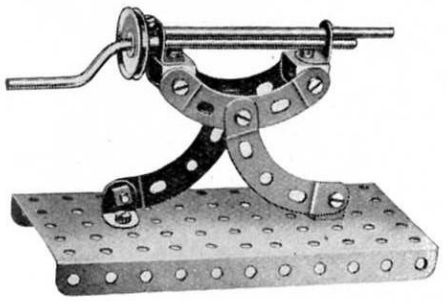
Model No. 0.56 Go Chair

Parts required :

2 of No.	2		
7 „ „	5		
2 „ „	16		
4 „ „	22		
11 „ „	37		
2 „ „	48A		



Model No. 0.57 Machine Gun



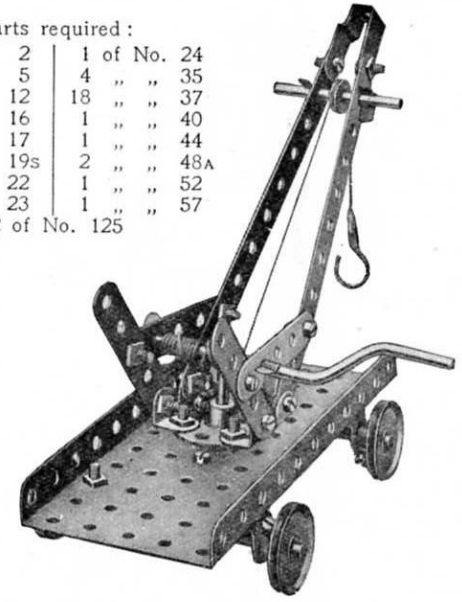
Parts required :

2 of No.	11	1 of No.	22
4 „ „	12	12 „ „	37
1 „ „	16	1 „ „	52
1 „ „	19s	4 „ „	90A

Model No. 0.58 Swivelling Crane

Parts required :

2 of No.	2	1 of No.	24
4 „ „	5	4 „ „	35
4 „ „	12	18 „ „	37
2 „ „	16	1 „ „	40
2 „ „	17	1 „ „	44
1 „ „	19s	2 „ „	48A
4 „ „	22	1 „ „	52
1 „ „	23	1 „ „	57
		2 of No.	125



Model No. 0.59 Prancing Horse

Parts required :

6 of No.	5
4 „ „	12
1 „ „	17
1 „ „	19s
4 „ „	22
1 „ „	24
20 „ „	37
1 „ „	44
1 „ „	52
1 „ „	90A
2 „ „	125
1 „ „	126
1 „ „	126A

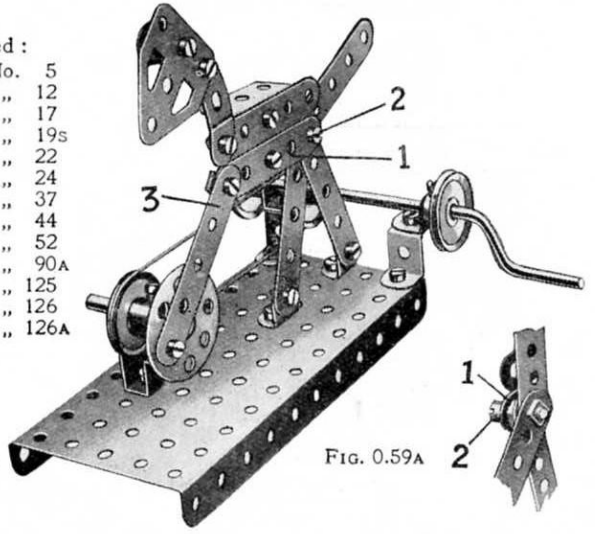
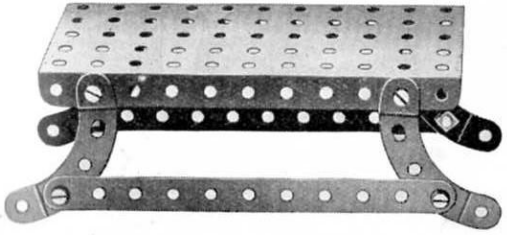


FIG. 0.59A

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 Fig. 0.59A. The strip 3 is free to move at each end about pivots formed from bolts and nuts.

Model No. 0.60 Bench



Parts required :

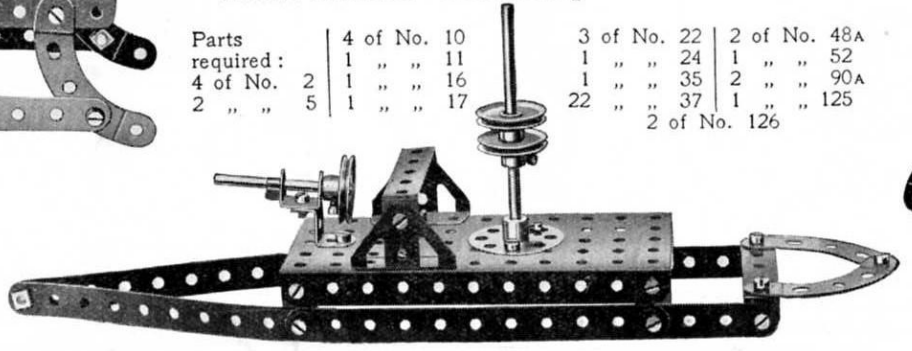
2 of No.	2
8 „ „	37
1 „ „	52
4 „ „	90A

Model No. 0.61 Battleship

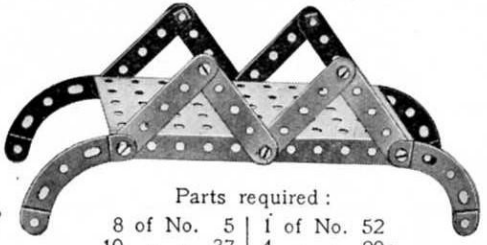
Parts required :

4 of No.	2	4 of No.	10	3 of No.	22
2 „ „	5	1 „ „	11	1 „ „	24
		1 „ „	16	1 „ „	35
		1 „ „	17	22 „ „	37
				2 of No.	126

2 of No.	48A
1 „ „	52
2 „ „	90A
1 „ „	125



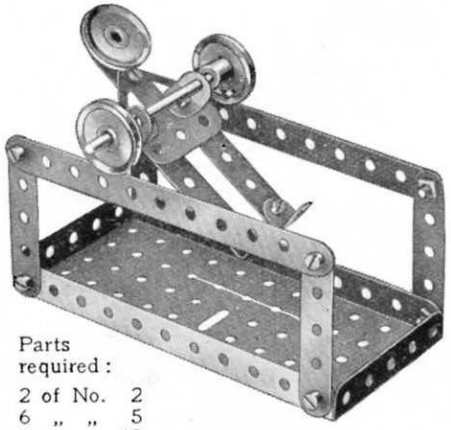
Model No. 0.62 Viaduct



Parts required :

8 of No.	5	1 of No.	52
10 „ „	37	4 „ „	90A

Model No. 0.63 Parallel Bars



Parts required :

2	of	No.	2	13	of	No.	37
6	„	„	5	1	„	„	52
1	„	„	10	1	„	„	111c
4	„	„	12	1	„	„	126A
1	„	„	16				
3	„	„	22				
2	„	„	35				

Model No. 0.64 Candle Shade

Parts required

4	of	No.	5
8	„	„	12
1	„	„	24
16	„	„	37
4	„	„	90A

Model No. 0.65 Revolving Office Chair

Parts required :

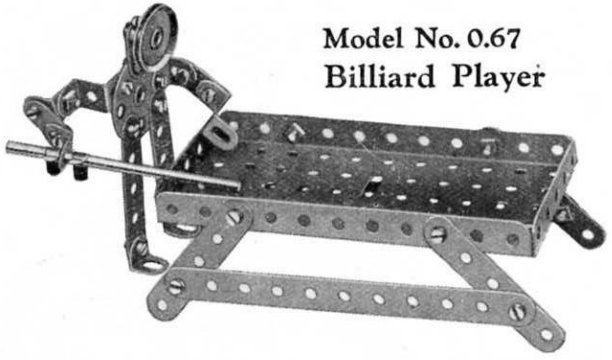
3	of	No.	5	18	of	No.	37
1	„	„	12	2	„	„	48A
1	„	„	17	4	„	„	90A
2	„	„	22	2	„	„	126
1	„	„	24	1	„	„	126A

Model No. 0.66 Prehistoric Animal

Parts required :

4	of	No.	2
2	„	„	5
5	„	„	10
2	„	„	11
4	„	„	12
14	„	„	37
4	„	„	90A

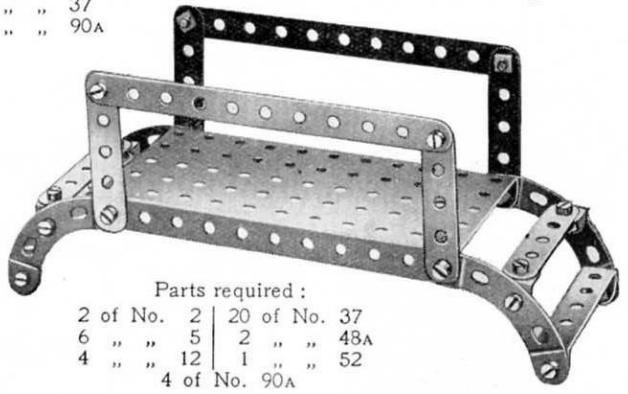
Model No. 0.67 Billiard Player



Parts required :

2	of	No.	2
6	„	„	5
3	„	„	10
5	„	„	12
1	„	„	16
1	„	„	22
1	„	„	24
2	„	„	35
21	„	„	37
2	„	„	125

Model No. 0.68 Bridge



Parts required :

2	of	No.	2	20	of	No.	37
6	„	„	5	2	„	„	48A
4	„	„	12	1	„	„	52
				4	of	No.	90A

HOW TO CONTINUE

This completes our examples of models that may be made with MECCANO Outfit No. 0. The next models are a little more advanced, requiring a number of extra parts to construct them. The necessary parts are all contained in a No. 0A Accessory Outfit, the price of which will be found in the list at the end of this Manual.

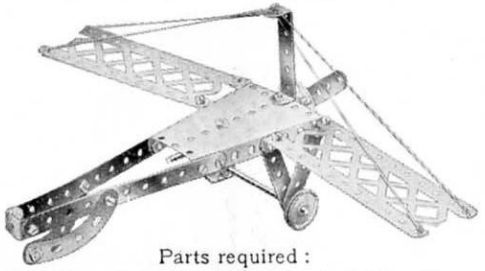
Model No. 1.1 Dinner Wagon

Parts required :

6	of No.	2
8	„ „	5
4	„ „	12
3	„ „	16
4	„ „	22
2	„ „	35
22	„ „	37
4	„ „	48A
1	„ „	52
2	„ „	126A

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

Model No. 1.2 Aeroplane



Parts required :

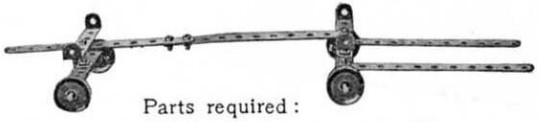
2	of No.	2	2	of No.	16	1	of No.	48A
5	„ „	5	2	„ „	22	1	„ „	54
1	„ „	11	1	„ „	24	2	„ „	90A
6	„ „	12	21	„ „	37	2	„ „	100

Model No. 1.3 Tandem Car

Parts required :

4	of No.	2	26	of No.	37
8	„ „	5	5	„ „	48A
2	„ „	12	1	„ „	54
2	„ „	16	2	„ „	126A
4	„ „	19B			

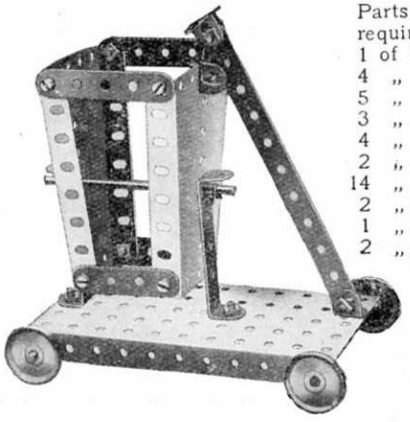
Model No. 1.5 Timber Drag



Parts required :

4	of No.	2	2	of No.	16	8	of No.	37
2	„ „	11	4	„ „	22	4	„ „	48A

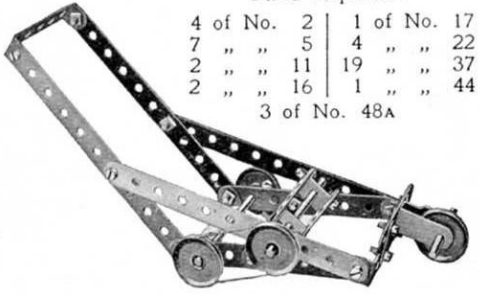
Model No. 1.4 Tip Wagon



Parts required :

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

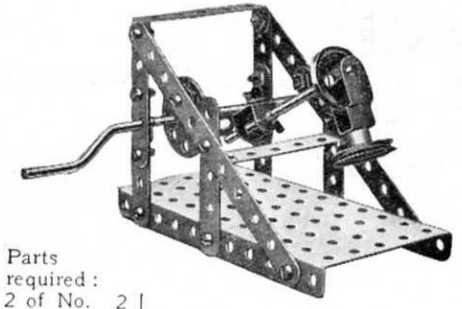
Model No. 1.6 Lawn Mower



Parts required :

4	of No.	2	1	of No.	17			
7	„ „	5	4	„ „	22			
2	„ „	11	19	„ „	37			
2	„ „	16	1	„ „	44			
			3	of No.	48A			

Model No. 1.7 Mechanical Hammer

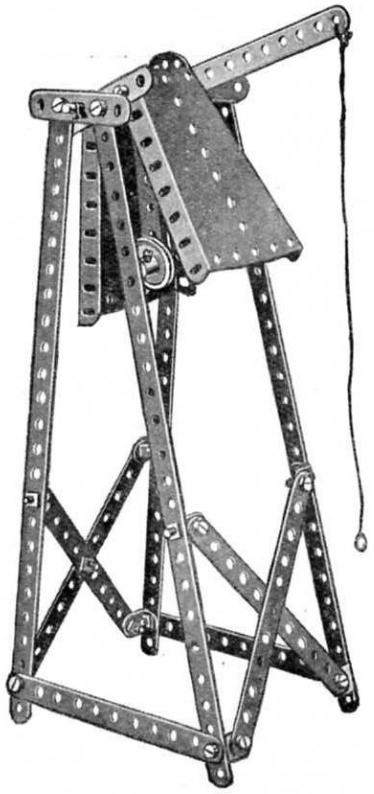


Parts required :

2	of No.	2						
6	„ „	5	1	of No.	19s	18	of No.	37
1	„ „	11	2	„ „	22	1	„ „	44
1	„ „	12	1	„ „	24	3	„ „	48A
1	„ „	16	4	„ „	35	1	„ „	52

These Models can be built with MECCANO Outfit No. 1 (or No. 0 and No. 0A)

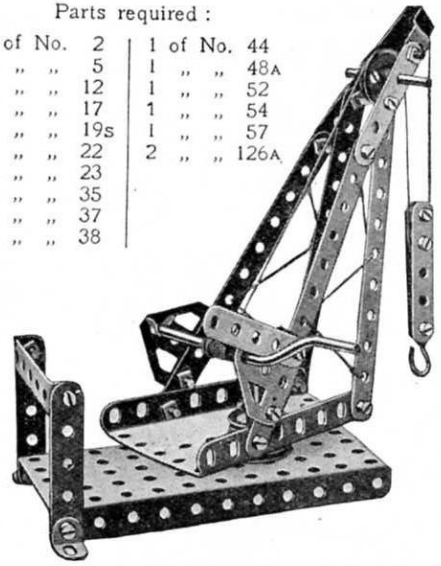
Model No. 1.8 Fire Alarm



Parts required :

4	of No.	1	1	of No.	22
7	„ „	2	1	„ „	24
1	„ „	3	4	„ „	35
3	„ „	5	27	„ „	37
8	„ „	12	2	„ „	54
1	„ „	16			

Model No. 1.9 Swivelling Crane

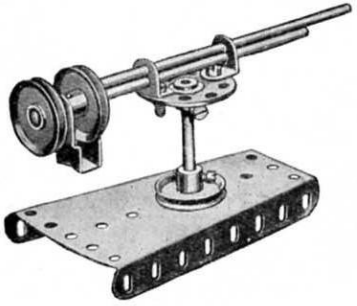


Parts required :

4	of No.	2	1	of No.	44
7	„ „	5	1	„ „	48A
2	„ „	12	1	„ „	52
2	„ „	17	1	„ „	54
1	„ „	19S	1	„ „	57
4	„ „	22	2	„ „	126A
1	„ „	23			
2	„ „	35			
21	„ „	37			
3	„ „	38			

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

Model No. 1.11 Quick-Firing Gun



Parts required :

2	of No.	12
2	„ „	16
1	„ „	17
4	„ „	22
1	„ „	24
2	„ „	37
1	„ „	44
1	„ „	54

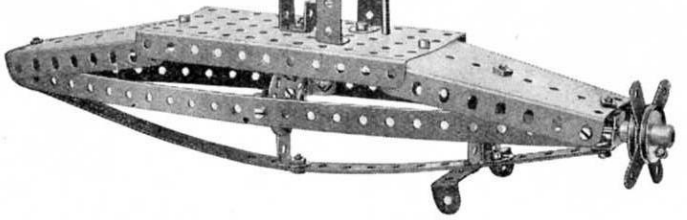
Model No. 1.10 Submarine

Parts required :

3	of No.	1
2	„ „	5
2	„ „	11

Parts required (*cont.*) :

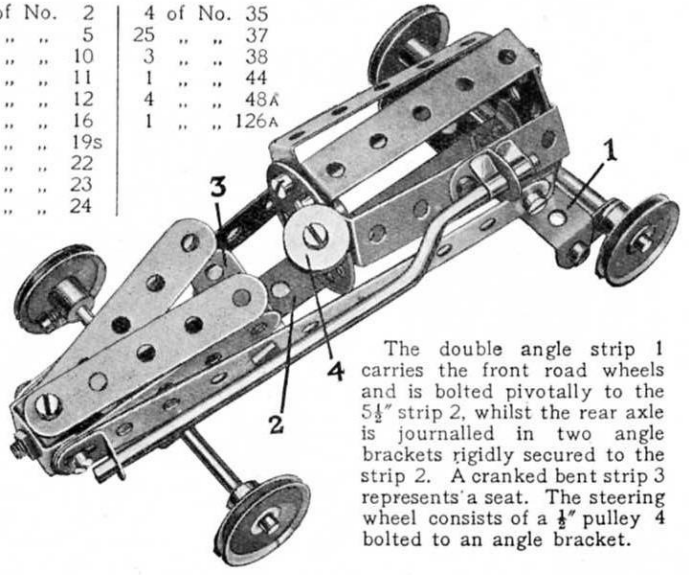
2	of No.	12	25	of No.	37
2	„ „	16	6	„ „	48A
1	„ „	19S	1	„ „	52
4	„ „	22	2	„ „	54
1	„ „	24	2	„ „	125
3	„ „	35	2	„ „	126A



Model No. 1.12 Racing Motor Car

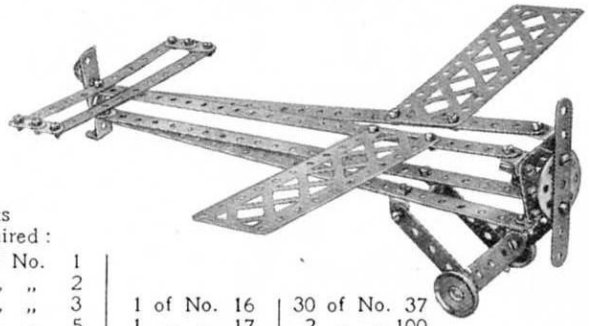
Parts required :

3	of No.	2	4	of No.	35
4	„ „	5	25	„ „	37
4	„ „	10	3	„ „	38
2	„ „	11	1	„ „	44
8	„ „	12	4	„ „	48A
2	„ „	16	1	„ „	126A
1	„ „	19S			
4	„ „	22			
1	„ „	23			
1	„ „	24			



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. 1.13 Aeroplane



Parts required :

4	of No.	1	1	of No.	16	30	of No.	37
2	„ „	2						
1	„ „	3	1	„ „	17	2	„ „	100
4	„ „	5	2	„ „	22	2	„ „	125
4	„ „	10	1	„ „	24	1	„ „	126
1	„ „	11	1	„ „	35	2	„ „	126A
8	„ „	12						

Model No. 1.14 Man Climbing Pole

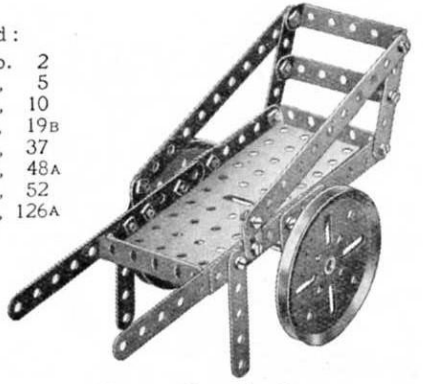
Parts required :

2	of No.	1	26	of No.	37			
5	„ „	10	4	„ „	48A			
1	„ „	11	1	„ „	52			
6	„ „	12	2	„ „	125			
1	„ „	18A	2	„ „	126			
3	„ „	22	1	„ „	126A			

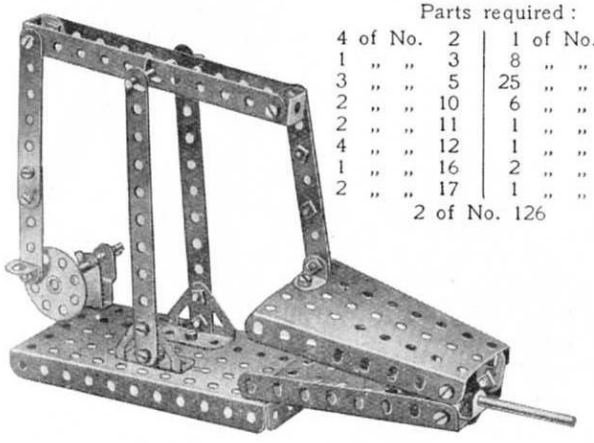
Model No. 1.15 Coster's Barrow

Parts required :

4	of No.	2
4	„ „	5
2	„ „	10
2	„ „	19B
16	„ „	37
2	„ „	48A
1	„ „	52
2	„ „	126A



Model No. 1.16 Bellows



Parts required :

4	of No.	2	1	of No.	24			
1	„ „	3	8	„ „	35			
3	„ „	5	25	„ „	37			
2	„ „	10	6	„ „	37A			
2	„ „	11	1	„ „	44			
4	„ „	12	1	„ „	52			
1	„ „	16	2	„ „	54			
2	„ „	17	1	„ „	111c			

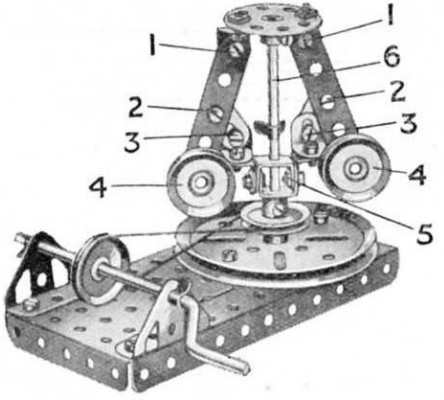
2 of No. 126

Model No. 1.17 Centrifugal Governor

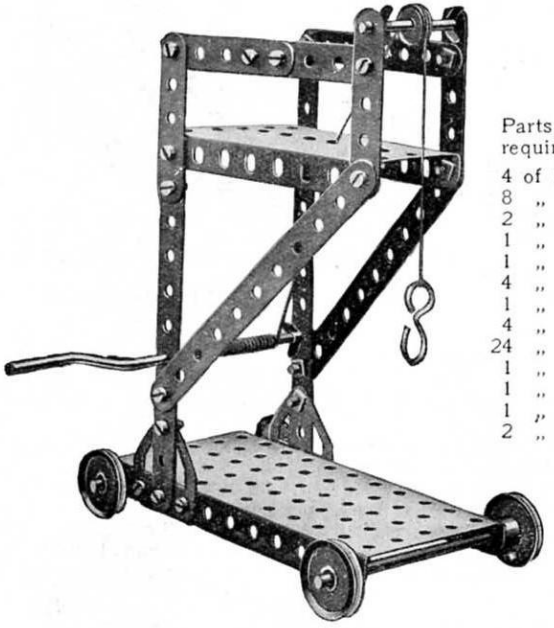
The 3" pulley wheel is bolted to the 5½" × 2½" flanged plate as shown, and the rod 6 is free to rotate in its boss. The bolts 1, 2, 3, are provided with lock-nuts. When the engine to which the governor is attached works at too great a speed, the 1" fast pulley wheels 4 fly outward and lift the two double brackets 5. In actual practice this movement is utilised to close the engine valves and so reduce speed.

Parts required :

2	of No.	5	1	of No.	22			
2	„ „	10	3	„ „	35			
2	„ „	11	18	„ „	37			
6	„ „	12	6	„ „	37A			
1	„ „	16	2	„ „	111c			
1	„ „	19B	2	„ „	126			
1	„ „	19S						
4	„ „	22						
1	„ „	24						



Model No. 1.18 Tower Wagon



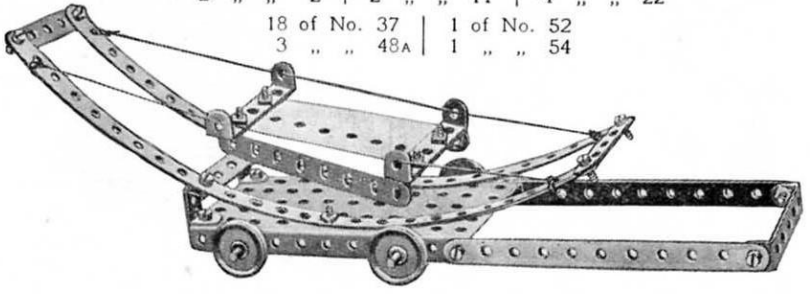
Parts required :

4	of No.	2
8	„ „	5
2	„ „	16
1	„ „	17
1	„ „	19s
4	„ „	22
1	„ „	23
4	„ „	35
24	„ „	37
1	„ „	52
1	„ „	54
1	„ „	57
2	„ „	126A

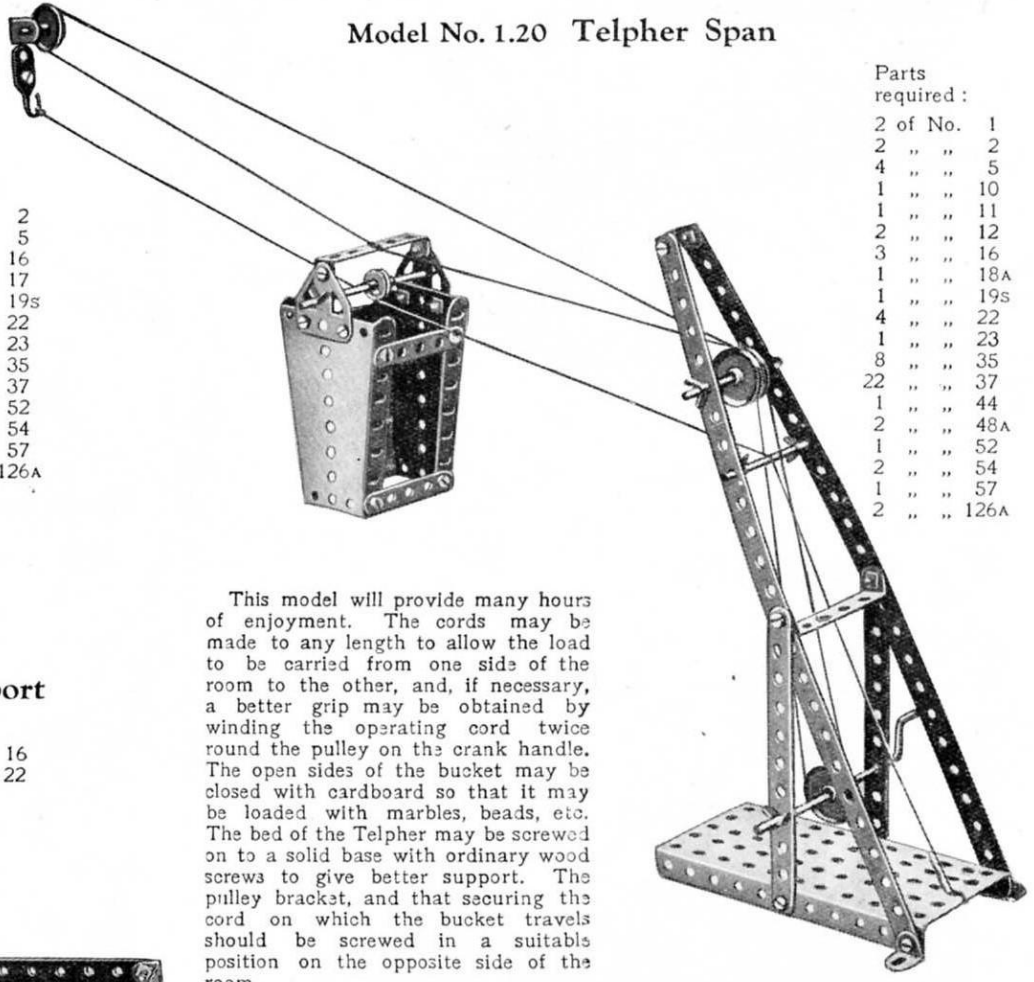
Model No. 1.19 Mountain Transport

Parts required :

2 of No. 1	3 of No. 5	2 of No. 16
2 „ „ 2	2 „ „ 11	4 „ „ 22
18 of No. 37	1 of No. 52	
3 „ „ 48A	1 „ „ 54	



Model No. 1.20 Telpher Span



Parts required :

2	of No.	1
2	„ „	2
4	„ „	5
1	„ „	10
1	„ „	11
2	„ „	12
3	„ „	16
1	„ „	18A
1	„ „	19s
4	„ „	22
1	„ „	23
8	„ „	35
22	„ „	37
1	„ „	44
2	„ „	48A
1	„ „	52
2	„ „	54
1	„ „	57
2	„ „	126A

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.

Model No. 1.21 Horseman

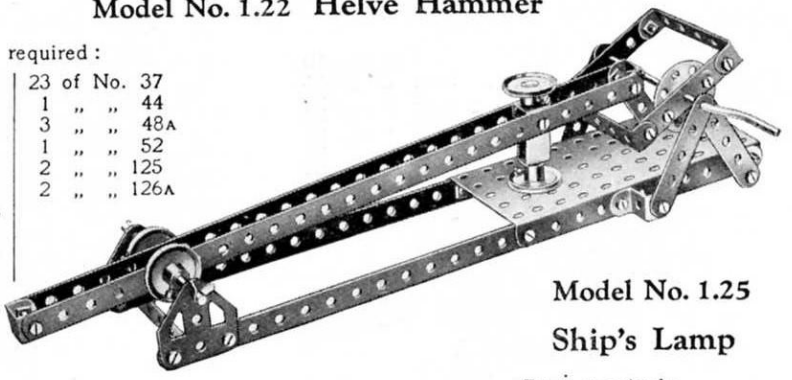
Parts required :

2	of No.		2
7	„	„	5
3	„	„	10
2	„	„	12
2	„	„	16
4	„	„	22
1	„	„	24
17	„	„	37
1	„	„	52
1	„	„	54
2	„	„	90A
1	„	„	126A

Model No. 1.22 Helve Hammer

Parts required :

4	of No.		1
6	„	„	5
2	„	„	11
2	„	„	12
1	„	„	16
1	„	„	17
1	„	„	19S
4	„	„	22
1	„	„	24
4	„	„	35
23	of No.		37
1	„	„	44
3	„	„	48A
1	„	„	52
2	„	„	125
2	„	„	126A

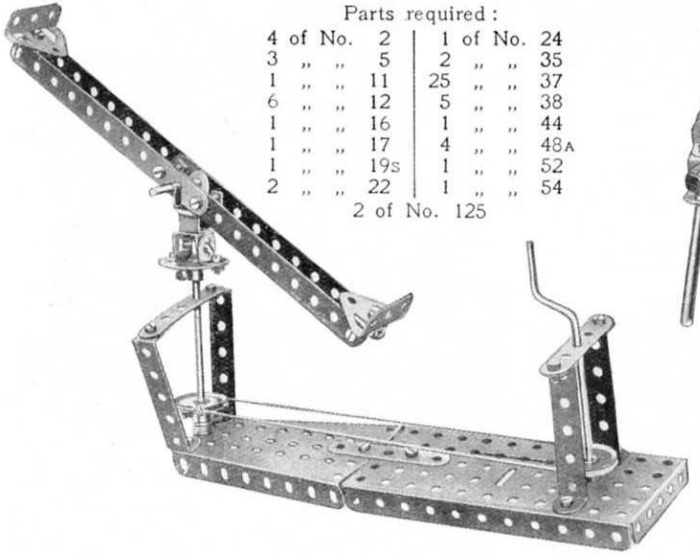


Model No. 1.23 Revolving See-Saw

Parts required :

4	of No.		2
3	„	„	5
1	„	„	11
6	„	„	12
1	„	„	16
1	„	„	17
1	„	„	19S
2	„	„	22
1	of No.		24
2	„	„	35
25	„	„	37
5	„	„	38
1	„	„	44
4	„	„	48A
1	„	„	52
1	„	„	54

2 of No. 125



Model No. 1.24 King Meccano

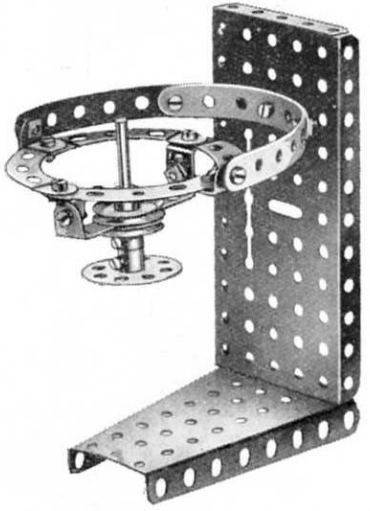
Parts required :

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

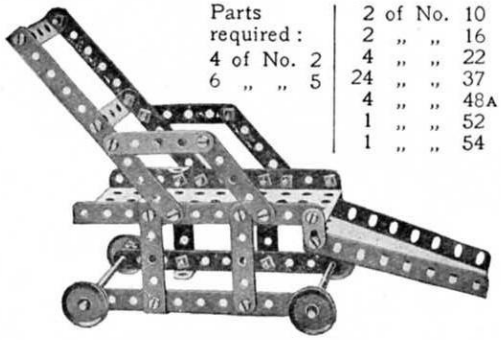
Model No. 1.25 Ship's Lamp

Parts required :

2	of No.		2
4	„	„	12
1	„	„	17
2	„	„	22
1	„	„	24
11	„	„	37
4	of No.		37A
1	„	„	48A
1	„	„	52
1	„	„	54
4	„	„	90A
2	„	„	111c



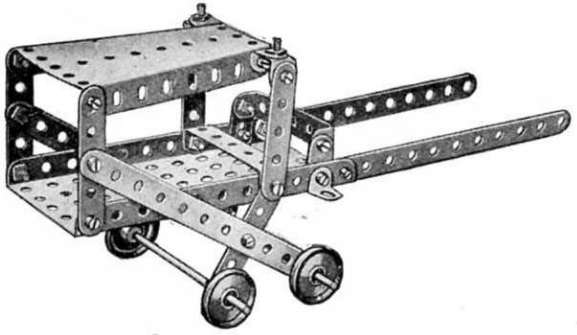
Model No. 1.26 Invalid Chair



Parts required :

4 of No.	2	2 of No.	10
6 „ „	5	2 „ „	16
		4 „ „	22
		24 „ „	37
		4 „ „	48A
		1 „ „	52
		1 „ „	54

Model No. 1.27 Ticca Gharry



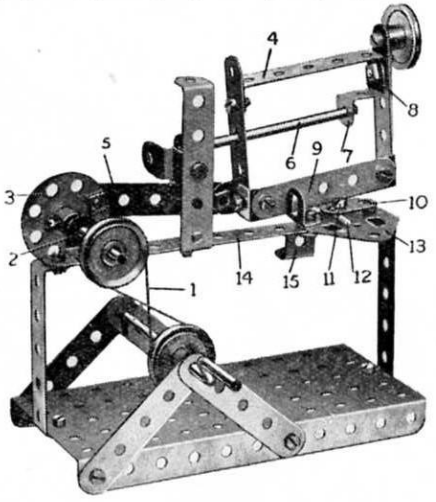
Parts required :

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

Model No. 1.28 Mechanical Saw

Parts required :

1 of No.	2	1 of No.	17	4 of No.	38
8 „ „	5	1 „ „	19S	1 „ „	44
1 „ „	10	3 „ „	22	4 „ „	48A
1 „ „	11	1 „ „	24	1 „ „	52
4 „ „	12	3 „ „	35	2 „ „	125
1 „ „	16	22 „ „	37	1 „ „	126A

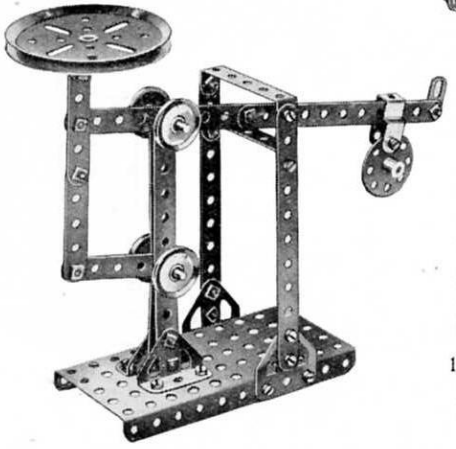


The strip 9 represents the saw. The crank handle drives through a belt 1 a short rod journalled in a double bracket 2 and carrying a bush wheel 3. The latter imparts a reciprocating motion to the saw frame 4 through a 2½" strip 5 loosely mounted on bolts secured to the bush wheel and to an angle bracket 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 flat bracket to grip the object 12. The bolt 11 enters a nut held between the flat trunnion 13 and 5½" strip 14, which are spaced apart for the purpose by washers placed on the two bolts 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.

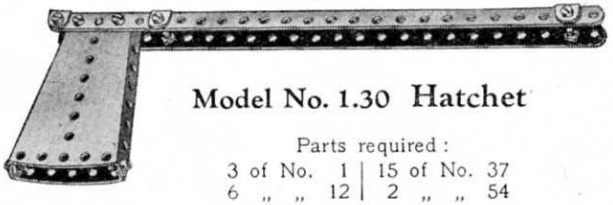
Model No. 1.29 Letter Balance

Parts required :

6 of No.	2	4 of No.	22	2 of No.	48A
3 „ „	5	1 „ „	24	1 „ „	52
1 „ „	10	26 „ „	37	2 „ „	111C
1 „ „	12	4 „ „	37A	2 „ „	126
2 „ „	18A	2 „ „	38	2 „ „	126A
1 „ „	19B	1 „ „	44		



Model No. 1.30 Hatchet



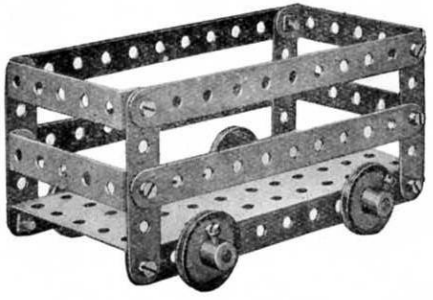
Parts required :

3 of No.	1	15 of No.	37
6 „ „	12	2 „ „	54

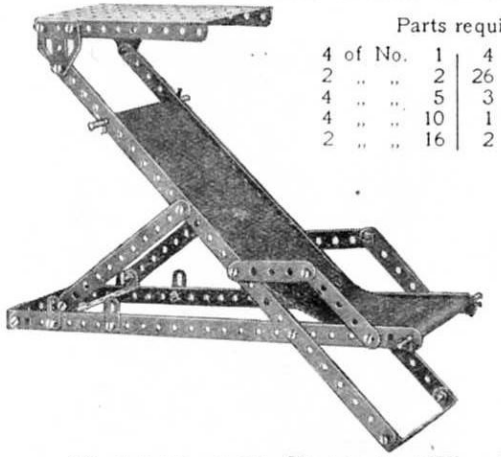
Model No. 1.31 Truck with Sides

Parts required :

4 of No.	2
4 „ „	5
2 „ „	16
4 „ „	22
12 „ „	37
4 „ „	48A
1 „ „	52



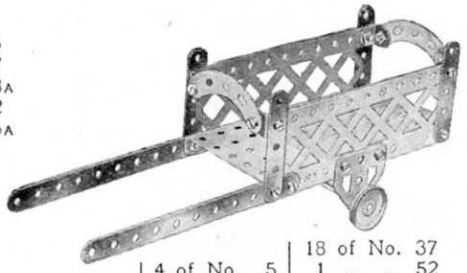
Model No. 1.32 Deck Chair



Parts required :

4	of No.	1	4	of No.	35
2	„ „	2	26	„ „	37
4	„ „	5	3	„ „	48A
4	„ „	10	1	„ „	52
2	„ „	16	2	„ „	126A

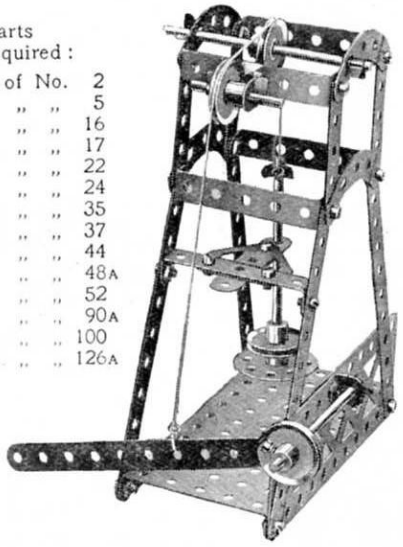
Model No. 1.33 Luggage Cart



Parts required :

2	of No.	2	4	of No.	5
			4	„ „	12
			1	„ „	16
			2	„ „	22
			18	of No.	37
			1	„ „	52
			2	„ „	90A
			2	„ „	100
			2	„ „	126A

Model No. 1.34 Mechanical Stamp



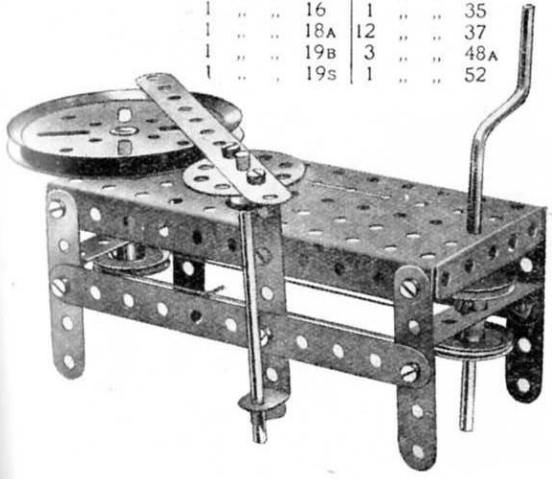
Parts required :

5	of No.	2
5	„ „	5
3	„ „	16
1	„ „	17
4	„ „	22
1	„ „	24
6	„ „	35
20	„ „	37
1	„ „	44
6	„ „	48A
1	„ „	52
4	„ „	90A
1	„ „	100
1	„ „	126A

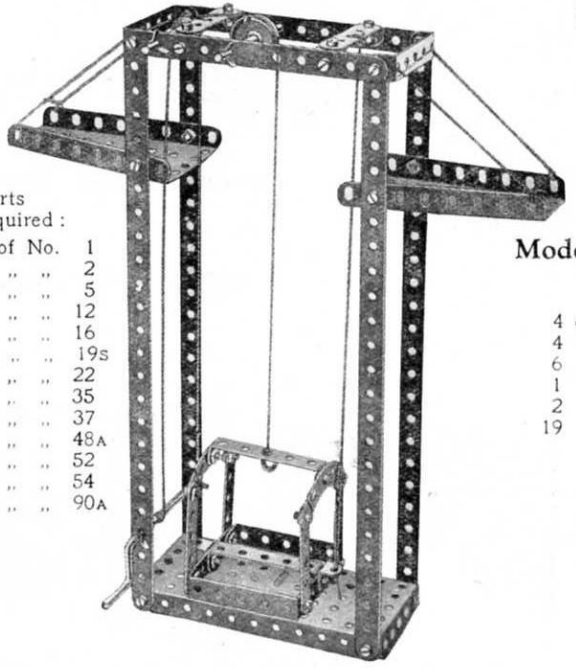
Model No. 1.35 Potter's Wheel

Parts required :

3	of No.	2	3	of No.	22
4	„ „	5	1	„ „	24
1	„ „	16	1	„ „	35
1	„ „	18A	12	„ „	37
1	„ „	19B	3	„ „	48A
1	„ „	19S	1	„ „	52



Model No. 1.36 Elevator



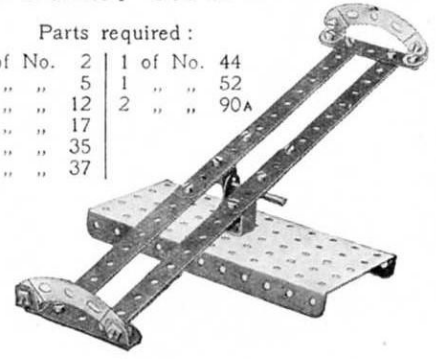
Parts required :

4	of No.	1
2	„ „	2
6	„ „	5
6	„ „	12
1	„ „	16
1	„ „	19S
1	„ „	22
5	„ „	35
32	„ „	37
6	„ „	48A
1	„ „	52
2	„ „	54
2	„ „	90A

Model No. 1.37 See-Saw

Parts required :

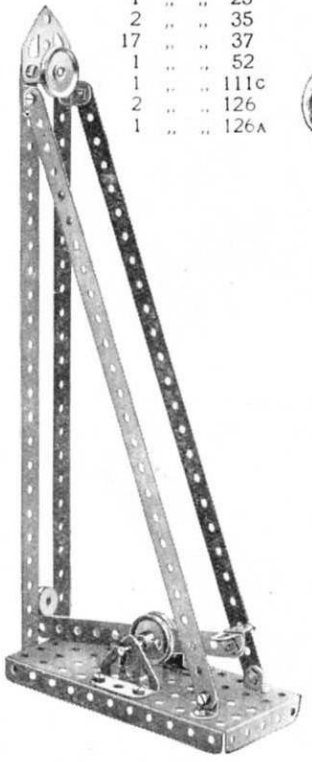
4	of No.	2	1	of No.	44
4	„ „	5	1	„ „	52
6	„ „	12	2	„ „	90A
1	„ „	17			
2	„ „	35			
19	„ „	37			



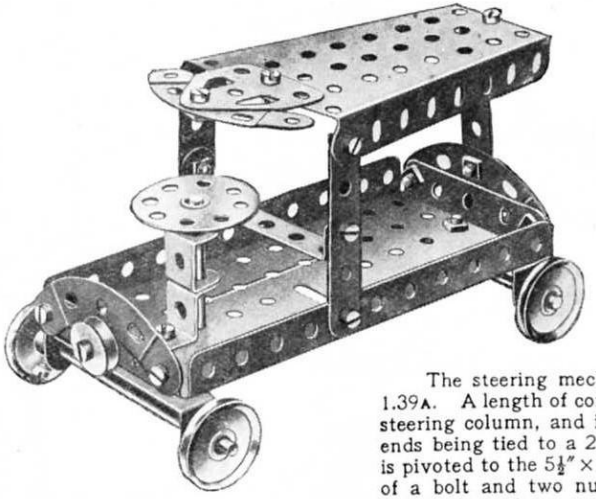
Model No. 1.38
Try-Your-Strength Machine

Parts required :

4	of No.	1
1	„ „	2
6	„ „	12
1	„ „	17
3	„ „	22
1	„ „	23
2	„ „	35
17	„ „	37
1	„ „	52
1	„ „	111c
2	„ „	126
1	„ „	126A



Model No. 1.39 Motor Van



Parts required :

3	of No.	5	1	of No.	35
1	„ „	11	17	„ „	37
1	„ „	12	1	„ „	48A
2	„ „	16	1	„ „	52
1	„ „	17	1	„ „	54
4	„ „	22	3	„ „	90A
1	„ „	23	1	„ „	111c
1	„ „	24	1	„ „	125
		1 of No. 126A			

The steering mechanism is shown more clearly in Fig. 1.39A. 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 $5\frac{1}{2}'' \times 2\frac{1}{2}''$ flanged plate of the lorry by means of a bolt and two nuts (see Standard Mechanisms Manual, Detail No. 262).

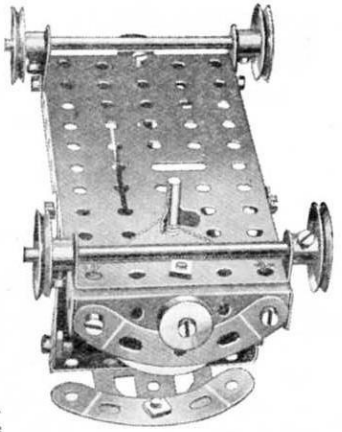
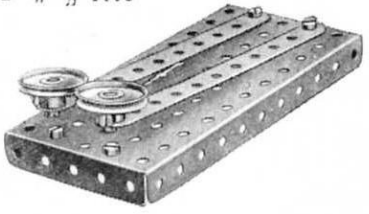


FIG. 1.39A

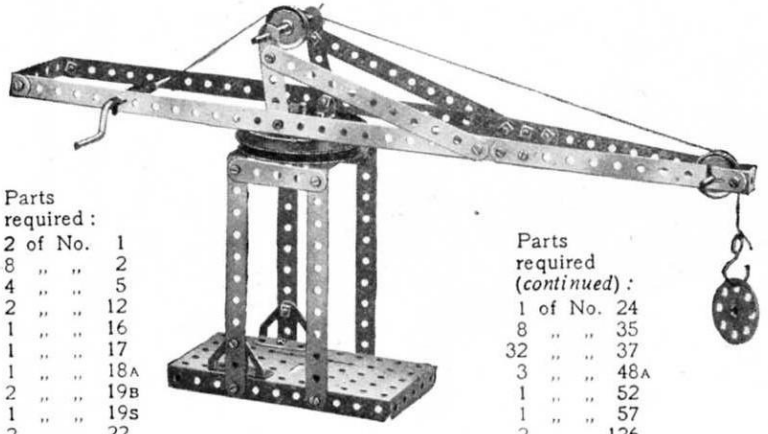
Model No. 1.40
Double Cable Key

Parts required :

2	of No.	2
2	„ „	22
4	„ „	37
1	„ „	52
2	„ „	111c



Model No. 1.41 Revolving Hammer-Head Crane



Parts required :

2	of No.	1
8	„ „	2
4	„ „	5
2	„ „	12
1	„ „	16
1	„ „	17
1	„ „	18A
2	„ „	19B
1	„ „	19S
2	„ „	22

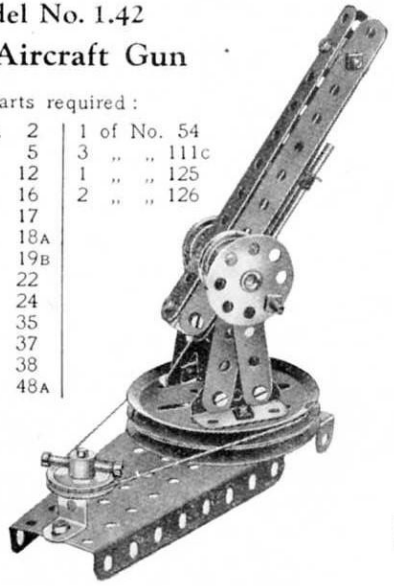
Parts required (*continued*) :

1	of No.	24
8	„ „	35
32	„ „	37
3	„ „	48A
1	„ „	52
1	„ „	57
2	„ „	126

Model No. 1.42
Anti-Aircraft Gun

Parts required :

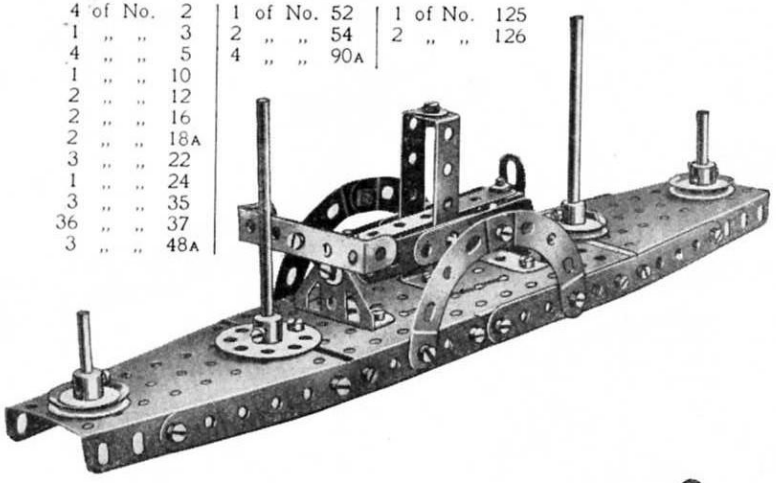
4	of	No. 2	1	of	No. 54
4	„	„ 5	3	„	„ 111c
8	„	„ 12	1	„	„ 125
1	„	„ 16	2	„	„ 126
1	„	„ 17			
2	„	„ 18A			
2	„	„ 19B			
3	„	„ 22			
1	„	„ 24			
4	„	„ 35			
18	„	„ 37			
2	„	„ 38			
1	„	„ 48A			



Model No. 1.43 Paddle Steamer

Parts required :

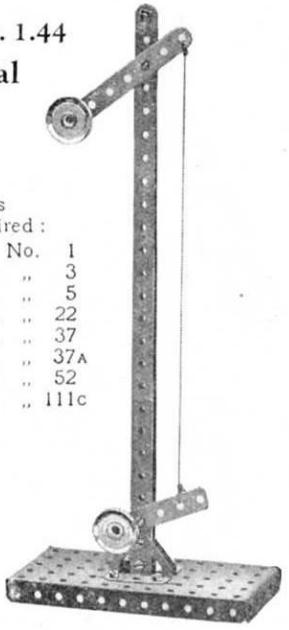
4	of	No. 2	1	of	No. 52	1	of	No. 125
1	„	„ 3	2	„	„ 54	2	„	„ 126
4	„	„ 5	4	„	„ 90A			
1	„	„ 10						
2	„	„ 12						
2	„	„ 16						
2	„	„ 18A						
3	„	„ 22						
1	„	„ 24						
3	„	„ 35						
36	„	„ 37						
3	„	„ 48A						



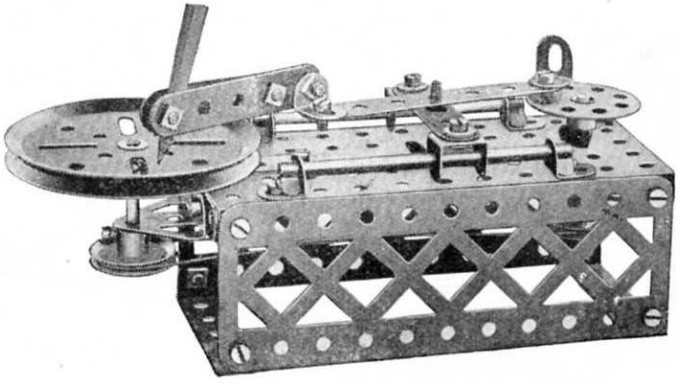
Model No. 1.44
Signal

Parts required :

2	of	No. 1
1	„	„ 3
1	„	„ 5
2	„	„ 22
11	„	„ 37
2	„	„ 37A
1	„	„ 52
2	„	„ 111c



Model No. 1.45 Meccanograph



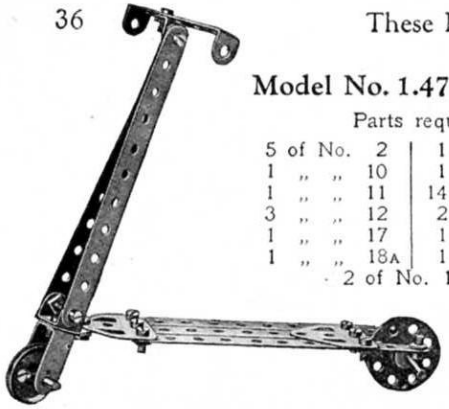
Parts required :

1	of	No. 3
4	„	„ 5
2	„	„ 11
6	„	„ 12
2	„	„ 16
2	„	„ 17
1	„	„ 19B
2	„	„ 22
1	„	„ 24
5	„	„ 35
21	„	„ 37
2	„	„ 37A
2	„	„ 38
2	„	„ 48A
1	„	„ 52
2	„	„ 100
3	„	„ 111c
2	„	„ 126

Model No. 1.46
Ladder on Wheels

Parts required :

6	of	No. 2
4	„	„ 5
2	„	„ 16
4	„	„ 19B
16	„	„ 37
8	„	„ 38
4	„	„ 48A
1	„	„ 52



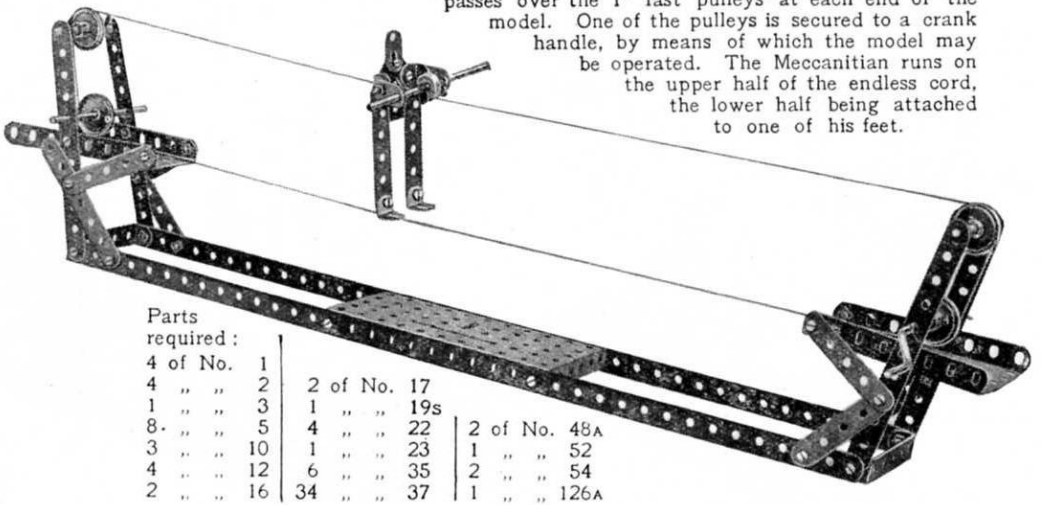
Model No. 1.47 Scooter

Parts required :

5 of No.	2	1 of No.	22
1 „ „	10	1 „ „	24
1 „ „	11	14 „ „	37
3 „ „	12	2 „ „	38
1 „ „	17	1 „ „	44
1 „ „	18A	1 „ „	48A
2 of No.	126A		

Model No. 1.48 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 of the endless cord, the lower half being attached to one of his feet.

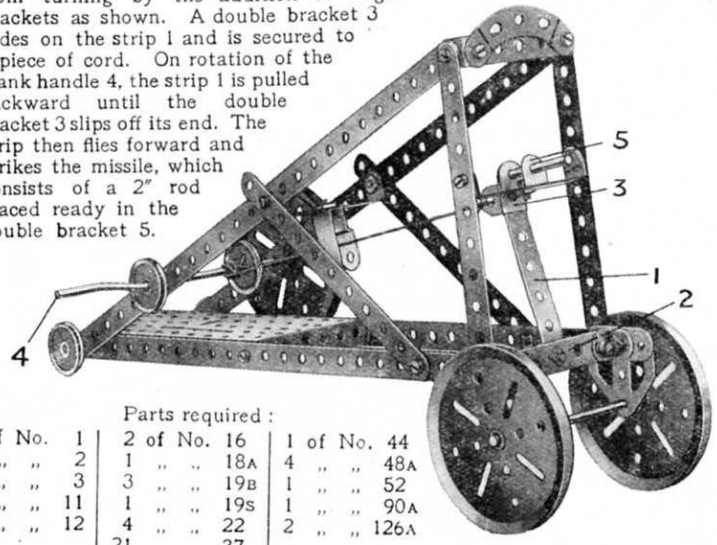


Parts required :

4 of No.	1				
4 „ „	2	2 of No.	17		
1 „ „	3	1 „ „	19s		
8 „ „	5	4 „ „	22	2 of No.	48A
3 „ „	10	1 „ „	23	1 „ „	52
4 „ „	12	6 „ „	35	2 „ „	54
2 „ „	16	34 „ „	37	1 „ „	126A

Model No. 1.49 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.



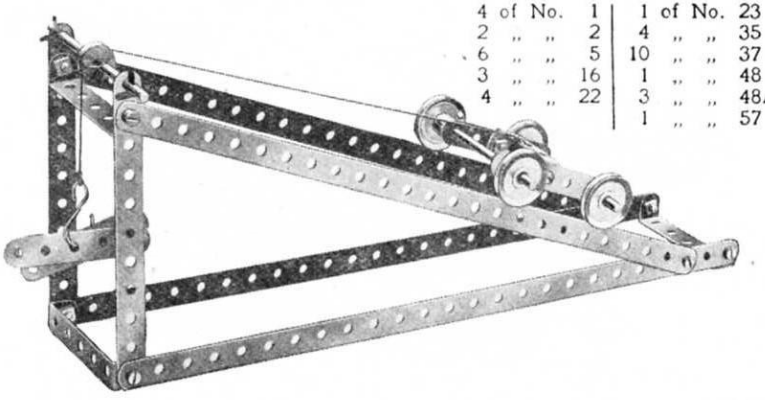
Parts required :

4 of No.	1	2 of No.	16	1 of No.	44
4 „ „	2	1 „ „	18A	4 „ „	48A
1 „ „	3	3 „ „	19B	1 „ „	52
2 „ „	11	1 „ „	19s	1 „ „	90A
2 „ „	12	4 „ „	22	2 „ „	126A
		21 „ „	37		

Model No. 1.50 Inclined Plane

Parts required :

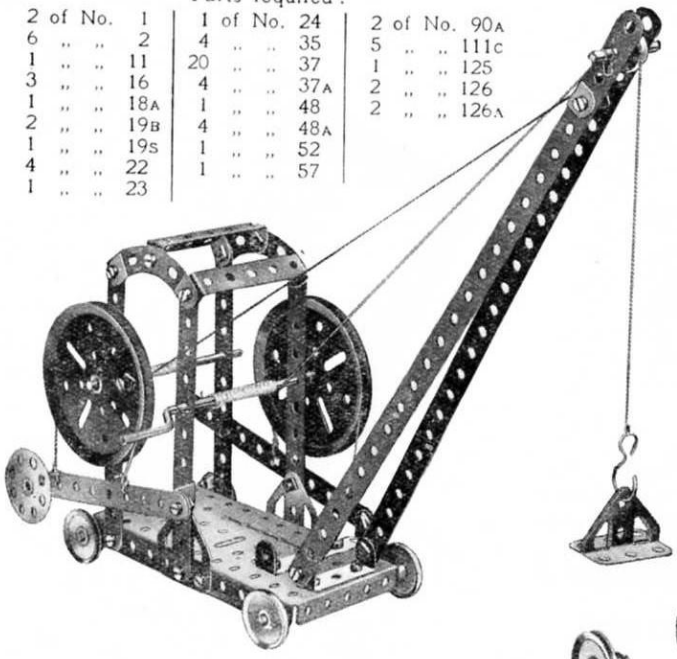
4 of No.	1	1 of No.	23
2 „ „	2	4 „ „	35
6 „ „	5	10 „ „	37
3 „ „	16	1 „ „	48
4 „ „	22	3 „ „	48A
		1 „ „	57



Model No. 1.51 Travelling Crane

Parts required :

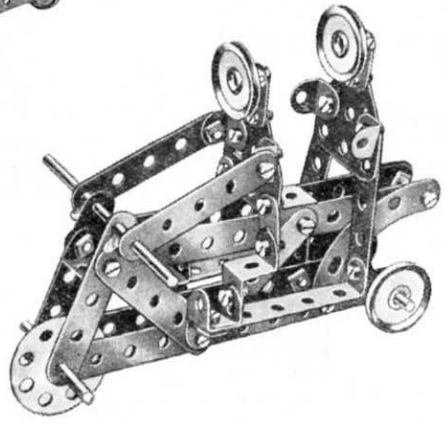
2 of No.	1	1 of No.	24	2 of No.	90A
6 „ „	2	4 „ „	35	5 „ „	111C
1 „ „	11	20 „ „	37	1 „ „	125
3 „ „	16	4 „ „	37A	2 „ „	126
1 „ „	18A	1 „ „	48	2 „ „	126A
2 „ „	19B	4 „ „	48A		
1 „ „	19S	1 „ „	52		
4 „ „	22	1 „ „	57		
1 „ „	23				



Model No. 1.52 Motor Cyclist and Pillion Rider

Parts required :

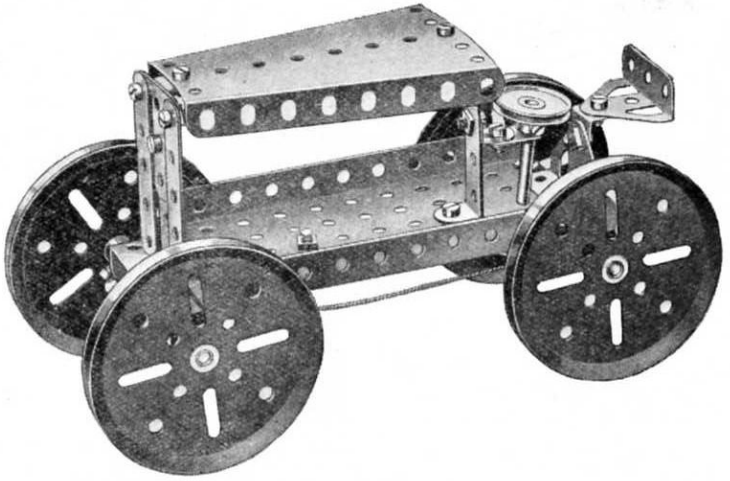
4 of No.	2	4 of No.	22		
9 „ „	5	1 „ „	24		
4 „ „	10	2 „ „	35		
2 „ „	11	30 „ „	37		
8 „ „	12	2 „ „	48A		
1 „ „	16	2 „ „	90A		
2 „ „	17	2 „ „	125		
2 of No.	126A				



Model No. 1.53 Motor Tractor

Parts required :

3 of No.	5	15 „ „	37
1 „ „	10	2 „ „	37A
2 „ „	12	6 „ „	38
2 „ „	16	4 „ „	48A
1 „ „	18A	1 „ „	52
4 „ „	19B	1 „ „	54
1 „ „	22	1 „ „	111C
1 „ „	24	2 „ „	126
		1 „ „	126A



The steering gear is shown in Fig. 1.53A. 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.

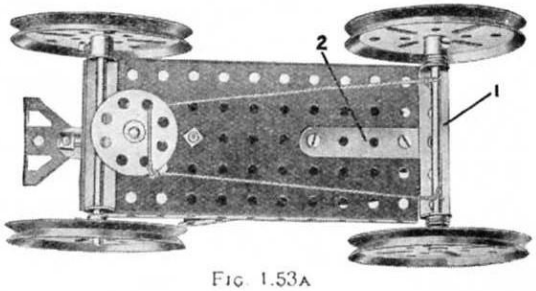
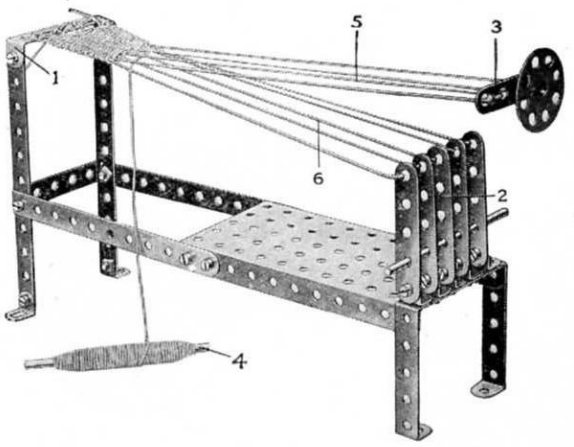


FIG. 1.53A

Model No. 1.54 Hand Loom



Parts required :

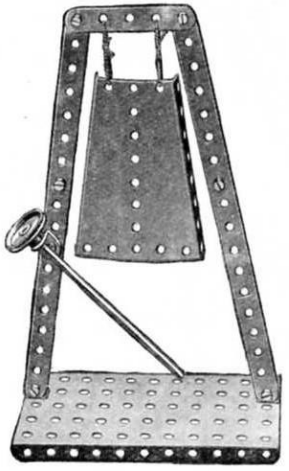
4	of No.	2
6	„ „	5
7	„ „	12
2	„ „	16
1	„ „	24
21	„ „	37
4	„ „	48A
1	„ „	52

The warp threads are tied at one end to a double angle strip 1, whilst their other ends are secured alternately to the tops of the upright strips 2, and the 2½" strip 3. The "shedding" movement of the warp is obtained by moving the strip 3 up or down each time the shuttle—a 3½" rod 4—is passed between the two layers of warp 5 and 6. Wool or similar material is particularly suited to this apparatus. The strands 6 should be kept very taut, and the weft threads may be closed up with the woven portion by means of an ordinary comb each time the shuttle passes.

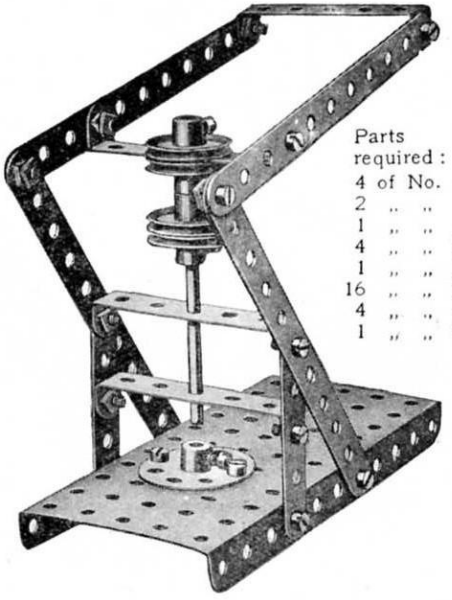
Model No. 1.55 Gong

Parts required :

4	of No.	2	1	of No.	22
1	„ „	5	9	„ „	37
3	„ „	12	1	„ „	52
1	„ „	16	1	„ „	54



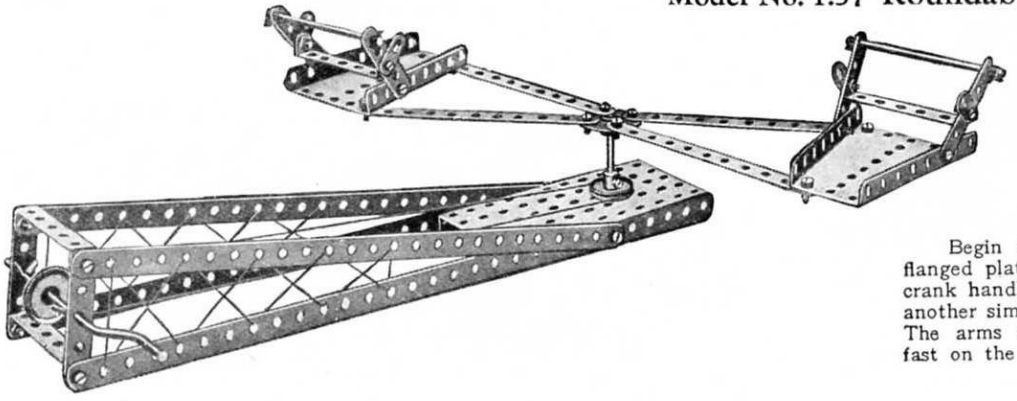
Model No. 1.56 Punching Machine



Parts required :

4	of No.	2
2	„ „	5
1	„ „	16
4	„ „	22
1	„ „	24
16	„ „	37
4	„ „	48A
1	„ „	52

Model No. 1.57 Roundabout

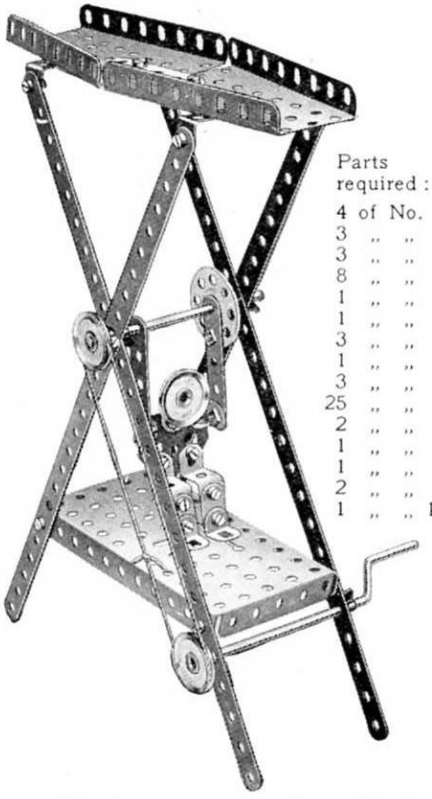


Parts required :

4	of No.	1	1	of No.	17	22	of No.	37
4	„ „	2	1	„ „	19	4	„ „	48A
6	„ „	5	3	„ „	22	1	„ „	52
4	„ „	10	1	„ „	24	2	„ „	54
2	„ „	16	6	„ „	35			

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 a vertical 2" rod, another similar pulley being secured to this rod beneath the plate. The arms are formed of four 5½" strips bolted to a bush wheel fast on the 2" rod.

Model No. 1.58 Gymnast



Parts required :

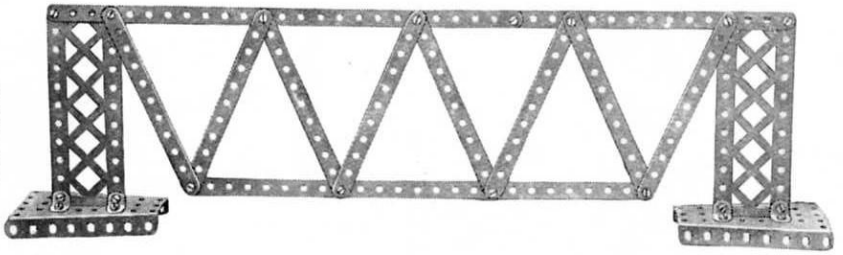
4	of No.	1
3	„ „	5
3	„ „	10
8	„ „	12
1	„ „	16
1	„ „	19s
3	„ „	22
1	„ „	24
3	„ „	35
25	„ „	37
2	„ „	37A
1	„ „	38
1	„ „	52
2	„ „	54
1	„ „	126A

One of the 2½" strips representing the arms of the gymnast is bolted to a bush wheel secured on a 3½" 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.

Model No. 1.60 Inverted Truss

Parts required :

3	of No.	1
8	„ „	2
4	„ „	12
20	„ „	37
2	„ „	54
2	„ „	100



Model No. 1.59 Rake

Parts required :

1	of No.	2
1	„ „	3
4	„ „	10
1	„ „	12
6	„ „	37

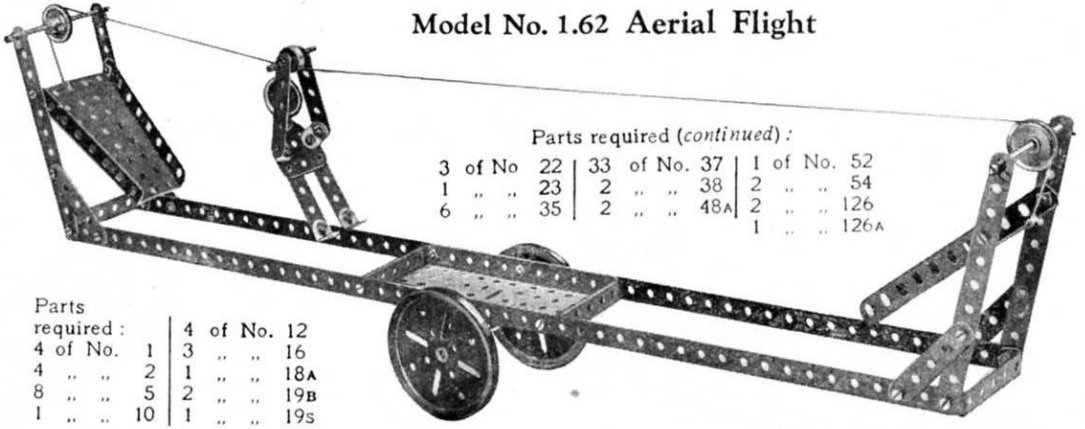
Model No. 1.61 Coat Hanger

Parts required :

1	of No.	1	2	of No.	5
2	„ „	2	6	„ „	37

1 of No. 57

Model No. 1.62 Aerial Flight



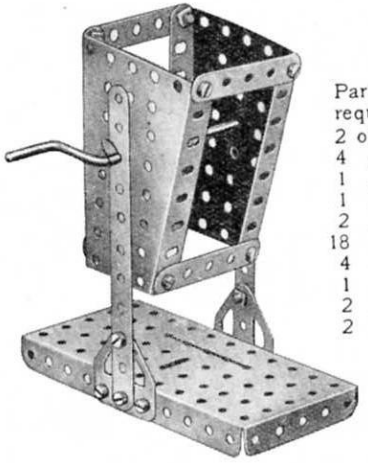
Parts required (*continued*) :

3	of No	22	33	of No.	37	1	of No.	52
1	„ „	23	2	„ „	38	2	„ „	54
6	„ „	35	2	„ „	48A	2	„ „	126
						1	„ „	126A

Parts required :

4	of No.	1	3	„ „	16
4	„ „	2	1	„ „	18A
8	„ „	5	2	„ „	19B
1	„ „	10	1	„ „	19s

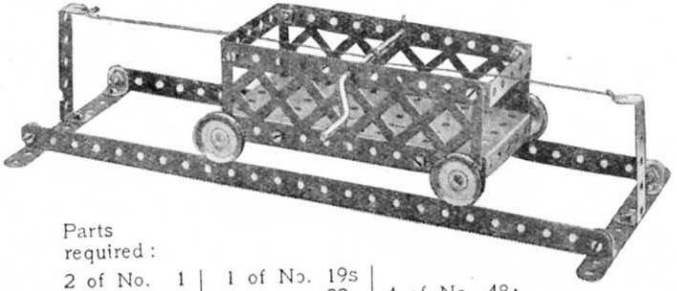
Model No. 1.63 Butter Churn



Parts required :

2	of No.	2
4	„ „	5
1	„ „	19s
1	„ „	24
2	„ „	35
18	„ „	37
4	„ „	38
1	„ „	52
2	„ „	54
2	„ „	126A

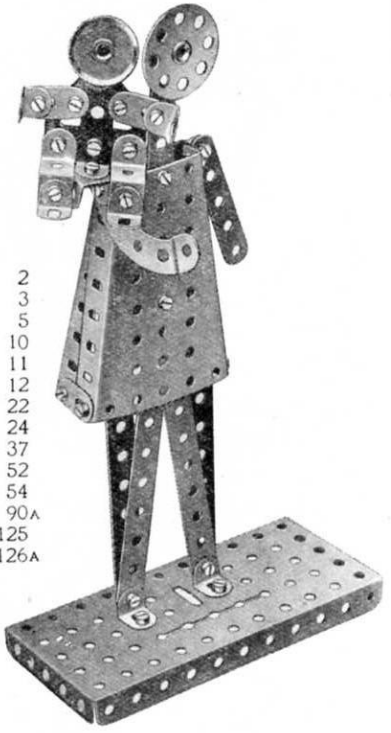
Model No. 1.64 Cable Railway



Parts required :

2	of No.	1	1	of No.	19s	4	of No.	48A
2	„ „	2	4	„ „	22	1	„ „	52
4	„ „	12	2	„ „	35	2	„ „	100
2	„ „	16	18	„ „	37			

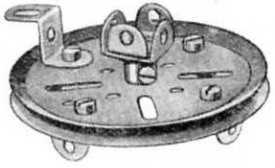
Model No. 1.65 Man and Boy



Parts required :

4	of No.	2
1	„ „	3
1	„ „	5
5	„ „	10
1	„ „	11
8	„ „	12
1	„ „	22
1	„ „	24
26	„ „	37
1	„ „	52
2	„ „	54
1	„ „	90A
2	„ „	125
1	„ „	126A

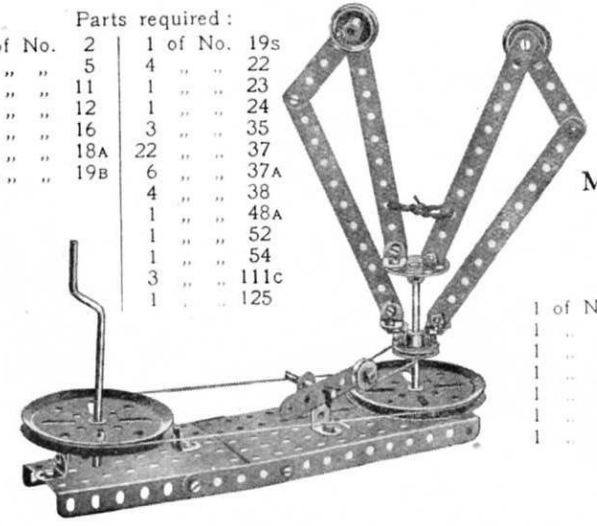
Model No. 1.67 Candle Stick



Parts required :

2	of No.	11
4	„ „	12
1	„ „	19B
4	„ „	37
1	„ „	111C
1	„ „	125

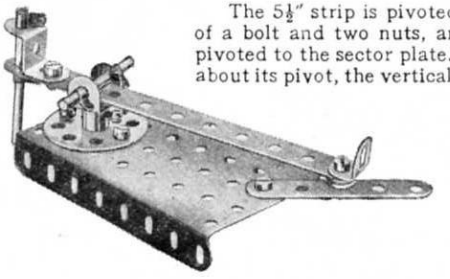
Model No. 1.66 Inverted Centrifugal Governor



Parts required :

4	of No.	2	1	of No.	19s
5	„ „	5	4	„ „	22
1	„ „	11	1	„ „	23
8	„ „	12	1	„ „	24
1	„ „	16	3	„ „	35
1	„ „	18A	22	„ „	37
2	„ „	19B	6	„ „	37A
			4	„ „	38
			1	„ „	48A
			1	„ „	52
			1	„ „	54
			3	„ „	111C
			1	„ „	125

Model No. 1.68 Machine for Tracing a Locus



Parts required :

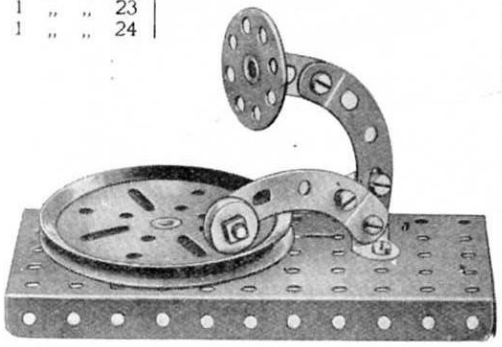
1	of No.	2	4	of No.	35
1	„ „	5	4	„ „	37
1	„ „	11	3	„ „	37A
1	„ „	12	4	„ „	38
1	„ „	17	1	„ „	54
1	„ „	18A	2	„ „	111C
1	„ „	24	1	„ „	125

The 5½″ strip is pivoted to the 2½″ strip by means of a bolt and two nuts, and the 2½″ strip is similarly pivoted to the sector plate. By revolving the 2½″ strip about its pivot, the vertical 1½″ rod can be made to trace a locus. If the positions of the 1½″ 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. 1.69 Gramophone

Parts required :

2 of No. 10	6 of No. 37	1 of No. 52
1 „ „ 12	1 „ „ 38	2 „ „ 111c
1 „ „ 19B		
1 „ „ 23		
1 „ „ 24		

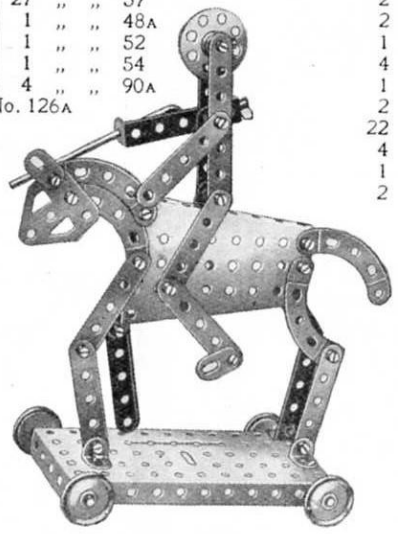


Model No. 1.70 Lancer

Parts required :

1 of No. 2		4 of No. 22	
1 „ „ 3		1 „ „ 24	
9 „ „ 5		1 „ „ 35	
2 „ „ 10		27 „ „ 37	
2 „ „ 11		1 „ „ 48A	
5 „ „ 12		1 „ „ 52	
2 „ „ 16		1 „ „ 54	
1 „ „ 19S		4 „ „ 90A	

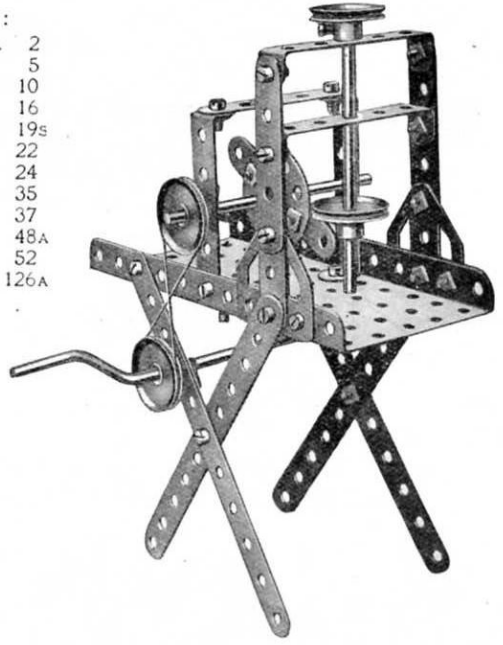
1 of No. 126A



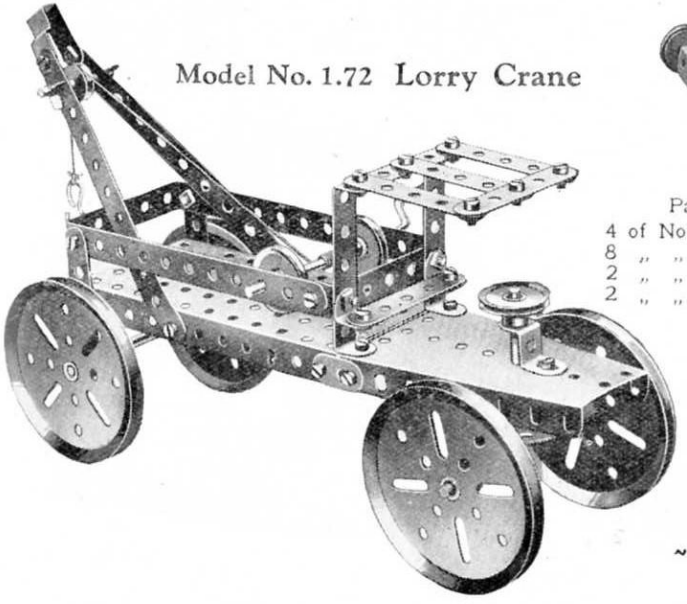
Model No. 1.71 Stamping Machine

Parts required :

4 of No. 2	
4 „ „ 5	
2 „ „ 10	
2 „ „ 16	
1 „ „ 19S	
4 „ „ 22	
1 „ „ 24	
2 „ „ 35	
22 „ „ 37	
4 „ „ 48A	
1 „ „ 52	
2 „ „ 126A	



Model No. 1.72 Lorry Crane



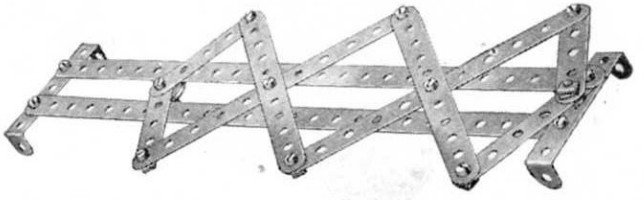
Parts required :

4 of No. 2		2 of No. 16	
8 „ „ 5		1 „ „ 17	
2 „ „ 10		1 „ „ 18A	
2 „ „ 12		1 „ „ 19S	
		3 „ „ 22	
		1 „ „ 23	
		1 „ „ 24	
		3 „ „ 35	
		29 „ „ 37	
		1 „ „ 44	
		5 „ „ 48A	
		1 „ „ 52	
		1 „ „ 54	
		1 „ „ 57	
		2 „ „ 125	
		4 „ „ 126	

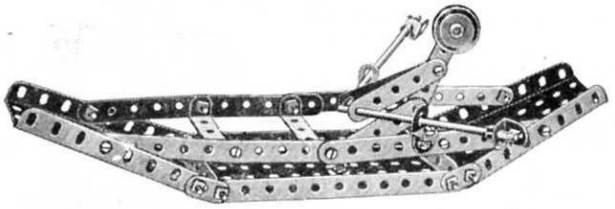
Model No. 1.73 Lazy Tongs

Parts required :

2 of No. 1	1 of No. 23	2 of No. 48A
4 „ „ 2	12 „ „ 37	2 „ „ 111c
4 „ „ 5	10 „ „ 37A	



Model No. 1.74 Rowing Boat



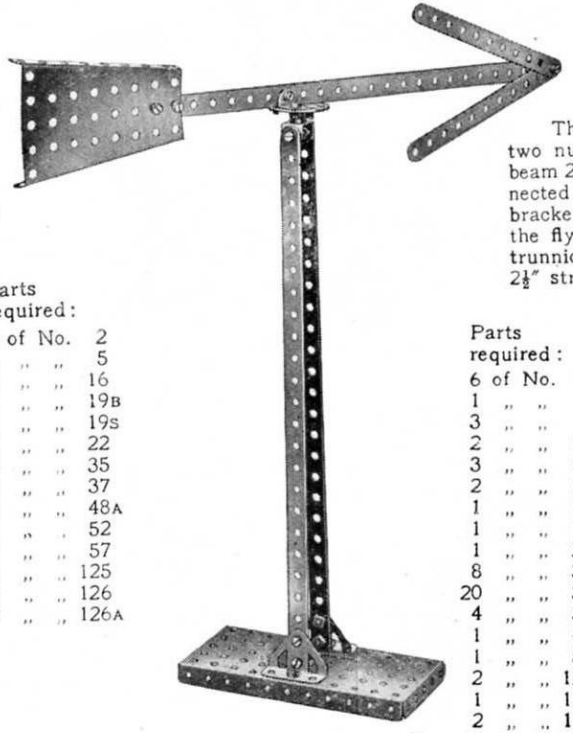
Parts required :

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

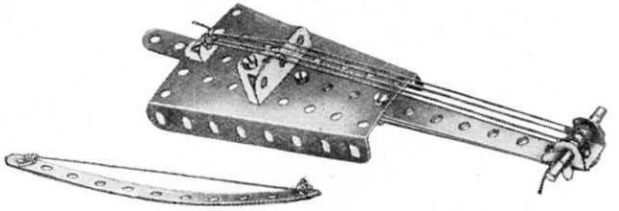
Model No. 1.75 Weather Vane

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



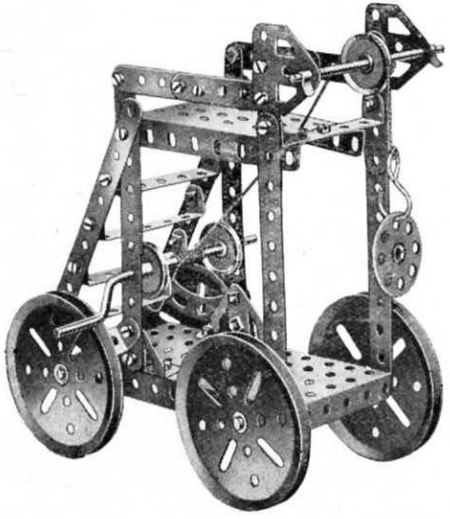
Model No. 1.76 Violin and Bow



Parts required :

4	of No.	2	1	of No.	12
1	„ „	5	1	„ „	18A
1	„ „	11	2	„ „	35
5	of No.	37			
1	„ „	54			
1	„ „	126			

Model No. 1.77 Tower Wagon



Parts required :

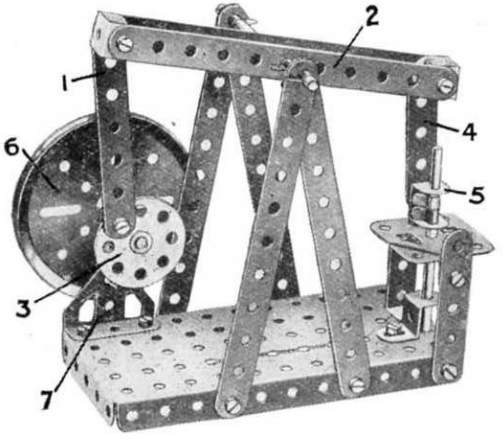
6	of No.	2
6	„ „	5
3	„ „	16
4	„ „	19B
1	„ „	19S
3	„ „	22
2	„ „	35
33	„ „	37
5	„ „	48A
1	„ „	52
1	„ „	57
1	„ „	125
2	„ „	126
2	„ „	126A

Model No. 1.78 Beam Engine

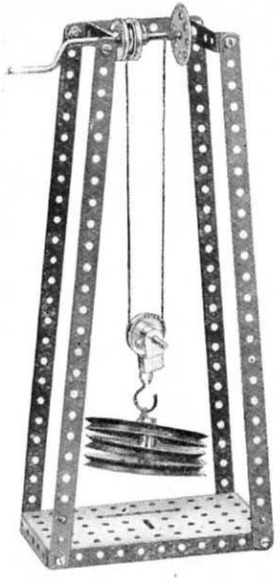
The connecting strip 1 is attached pivotally by a bolt and two nuts (Standard Mechanism No. 262) to one end of the beam 2 and to the bush wheel 3. The strip 4 is similarly connected to the other end of the beam 2 and to the double bracket 5 attached to the piston rod. The short rod carrying the flywheel 6 is journalled in a 2½" strip supported by the trunnion 7 and in a reversed angle bracket bolted to the 2½" strip.

Parts required :

6	of No.	2
1	„ „	3
3	„ „	5
2	„ „	11
3	„ „	12
2	„ „	16
1	„ „	17
1	„ „	19B
1	„ „	24
8	„ „	35
20	„ „	37
4	„ „	37A
1	„ „	48
1	„ „	52
2	„ „	125
1	„ „	126
2	„ „	126A



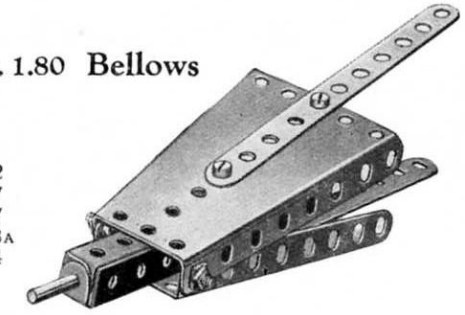
Model No. 1.79 Chinese Windlass



Parts required :

4	of No.	1
1	„ „	3
1	„ „	18A
3	„ „	19B
1	„ „	19S
3	„ „	22
1	„ „	23
1	„ „	24
8	„ „	37
1	„ „	44
2	„ „	48A
1	„ „	52
1	„ „	57

Model No. 1.80 Bellows



Parts required :

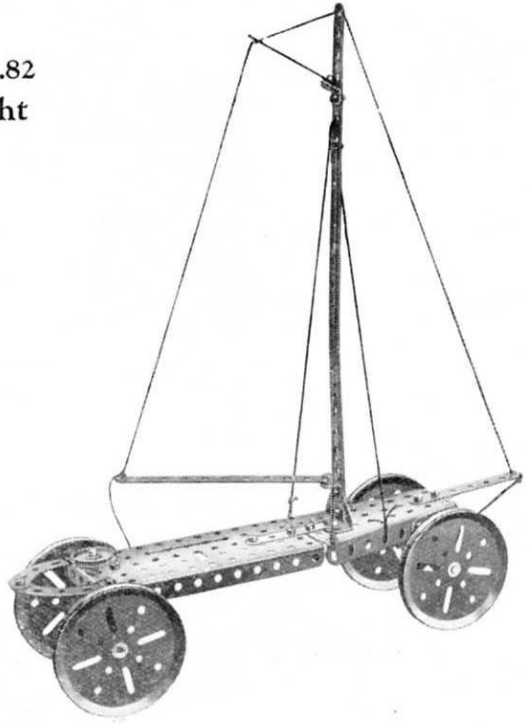
2	of No.	2
1	„ „	17
9	„ „	37
4	„ „	48A
2	„ „	54

Model No. 1.81 Bed Table

Parts required :

3	of No.	2
1	„ „	3
1	„ „	5
1	„ „	11
5	„ „	12
2	„ „	16
1	„ „	17
4	„ „	22
1	„ „	24
21	„ „	37
4	„ „	48A
1	„ „	52
1	„ „	126A

Model No. 1.82 Sand Yacht



Parts required :

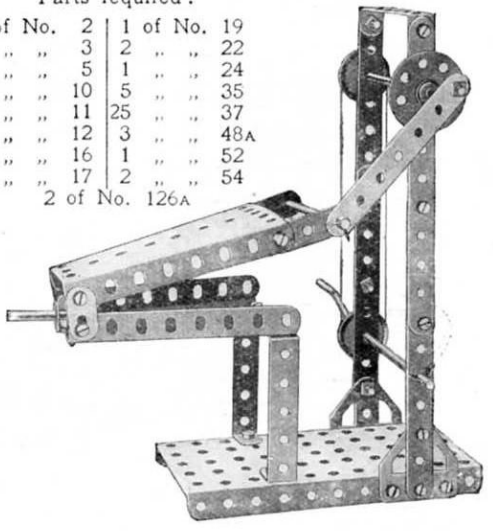
1	of No.	1
1	„ „	2
1	„ „	3
2	„ „	5
2	„ „	12
2	„ „	16
1	„ „	18A
4	„ „	19B
1	„ „	22
1	„ „	24
4	„ „	35
23	„ „	37
1	„ „	52
1	„ „	54
2	„ „	90A
1	„ „	125
1	„ „	126
2	„ „	126A

Model No. 1.83 Forge Bellows

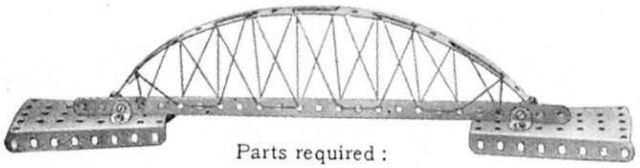
Parts required :

4	of No.	2	1	of No.	19
1	„ „	3	2	„ „	22
2	„ „	5	1	„ „	24
2	„ „	10	5	„ „	35
1	„ „	11	25	„ „	37
2	„ „	12	3	„ „	48A
2	„ „	16	1	„ „	52
1	„ „	17	2	„ „	54

2 of No. 126A



Model No. 1.84 Bow Girder



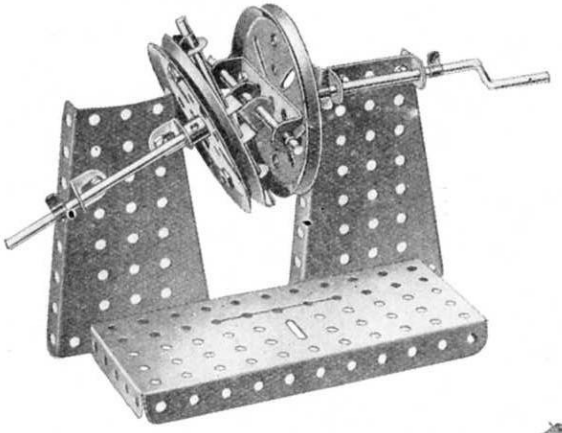
Parts required :

2 of No.	1	6 of No.	37
4 „ „	12	2 „ „	54

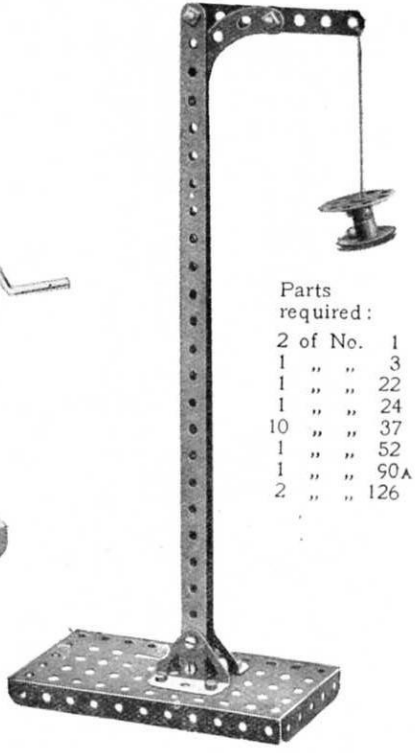
Model No. 1.85 Hooke's Coupling

Parts required :

2 of No.	11	7 of No.	35
2 „ „	12	12 „ „	37
3 „ „	16	1 „ „	48
2 „ „	19B	2 „ „	48A
1 „ „	19S	1 „ „	52
		2 of No.	54



Model No. 1.86 Arc Lamp

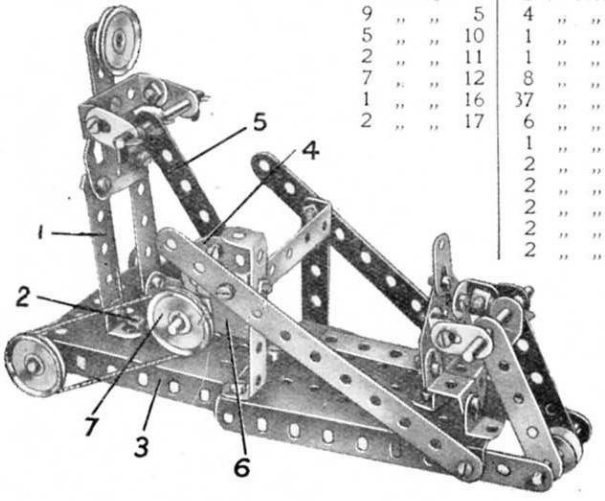


Parts required :

2 of No.	1
1 „ „	3
1 „ „	22
1 „ „	24
10 „ „	37
1 „ „	52
1 „ „	90A
2 „ „	126

Model No. 1.87 Coaster

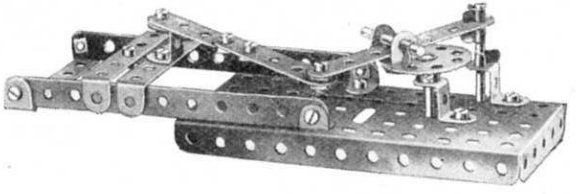
The figure 1 is loosely attached by lock-nutted bolts 2 to the sector plate 3 and is connected to the bush wheel 4 by the pivotally-attached 2½" strip 5. The 1½" rod carrying the bush wheel 4 is journalled in the cranked bent strip 6, the 1" fast pulley 7 being connected to the road wheel by a cord as shown.



Parts required :

2 of No.	2	2 of No.	18A
9 „ „	5	4 „ „	22
5 „ „	10	1 „ „	23
2 „ „	11	1 „ „	24
7 „ „	12	8 „ „	35
1 „ „	16	37 „ „	37
2 „ „	17	6 „ „	37A
		1 „ „	48
		2 „ „	48A
		2 „ „	54
		2 „ „	111C
		2 „ „	125
		2 „ „	126A

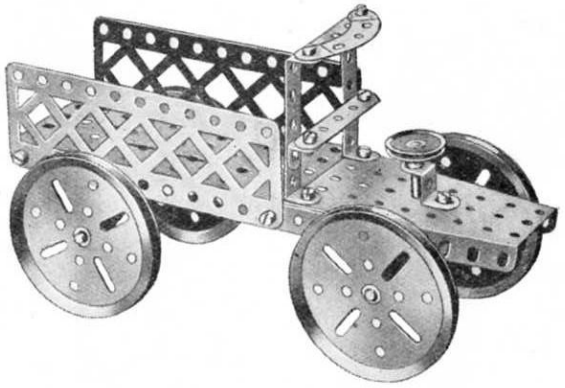
Model No. 1.88 Quick Return Device



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 „ „	18A	2 „ „	125

Model No. 1.89 Motor Lorry



Parts required.

2	of No.	2
2	„ „	5
2	„ „	12
2	„ „	16
1	„ „	18A
4	„ „	19B
1	„ „	24
25	„ „	37
2	„ „	38
3	„ „	48A
1	„ „	52
1	„ „	54
1	„ „	90A
2	„ „	100
2	„ „	125
2	„ „	126A

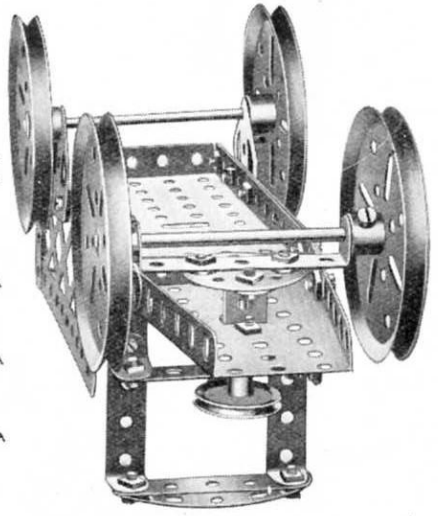
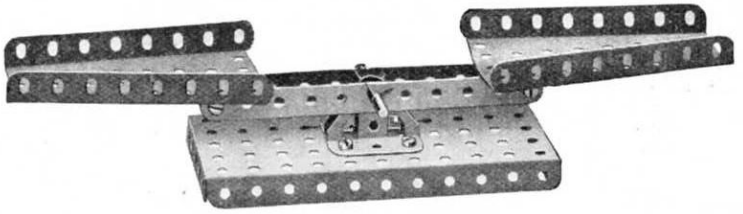


FIG. 1.89A

Model No. 1.90 Scales

Parts required:

2	of No.	2
2	„ „	12
1	„ „	18A
2	„ „	35
8	„ „	37
1	„ „	52
2	„ „	54
2	„ „	126

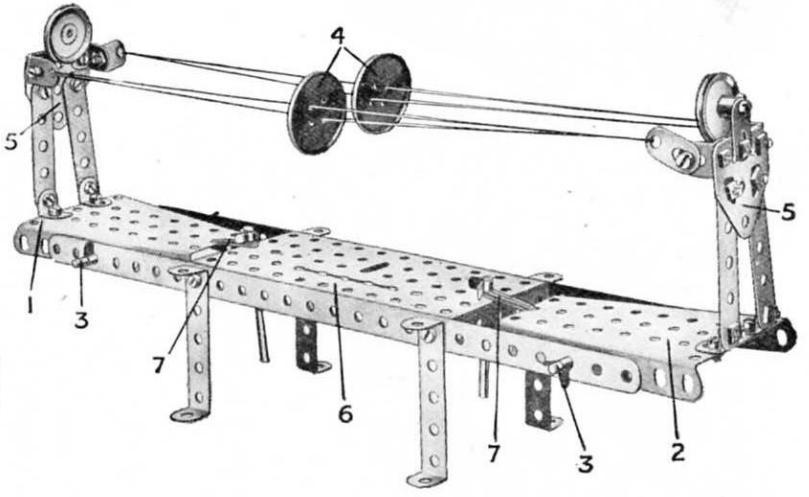


Model No. 1.91 Spinning Buttons

The sector plates 1 and 2 are mounted pivotally on the rods 3. Two large buttons 4 are placed on lengths of thread or thin elastic stretched between the arms of the Meccanitians 5. Start the model as follows: twist the threads a little with your fingers, pull the Meccanitians outward, then release them sharply. As soon as the buttons are spinning a slight downward touch on the feet of each Meccanitian is sufficient to keep them going. The ends of the sector plates 1 and 2 are connected to the flanged plate 6 by means of pieces of elastic 7.

Parts required:

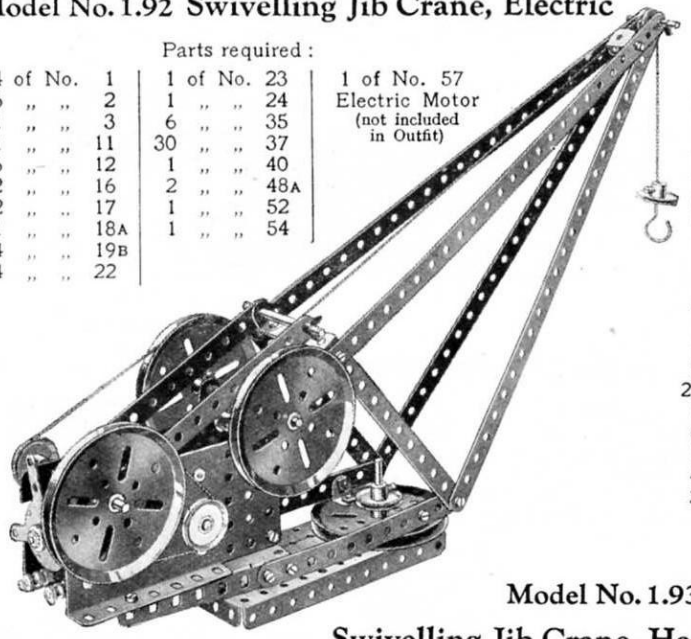
2	of No	1
6	„ „	5
4	„ „	10
8	„ „	12
2	„ „	16
2	„ „	17
2	„ „	22
6	„ „	35
28	„ „	37
4	„ „	48A
2	„ „	111C
2	„ „	126A



Model No. 1.92 Swivelling Jib Crane, Electric

Parts required :

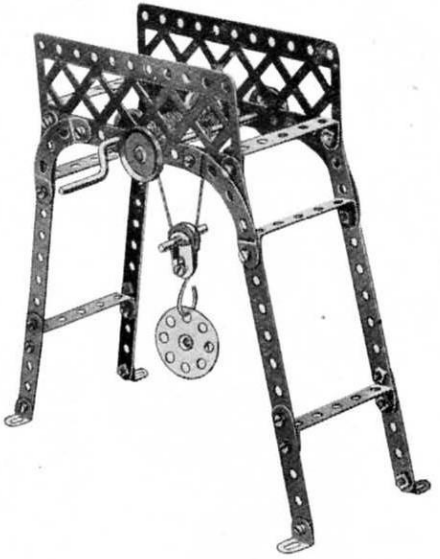
4	of No.	1	1	of No.	23	1 of No. 57 Electric Motor (not included in Outfit)	
6	„ „	2	1	„ „	24		
1	„ „	3	6	„ „	35		
1	„ „	11	30	„ „	37		
6	„ „	12	1	„ „	40		
2	„ „	16	2	„ „	48A		
2	„ „	17	1	„ „	52		
1	„ „	18A	1	„ „	54		
4	„ „	19B					
4	„ „	22					



Model No. 1.94 Overhead Crane

Parts required :

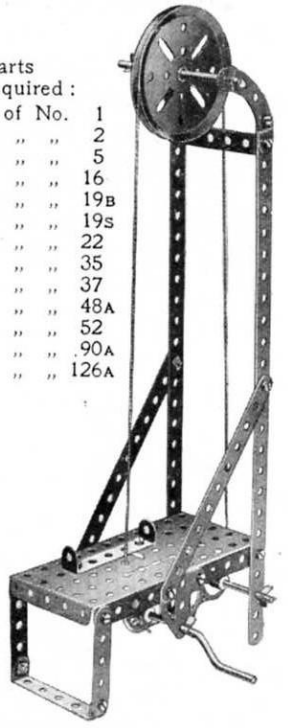
4	of No.	2
4	„ „	5
2	„ „	10
4	„ „	12
1	„ „	16
1	„ „	18A
1	„ „	19S
4	„ „	22
1	„ „	23
1	„ „	24
2	„ „	35
25	„ „	37
1	„ „	38
6	„ „	48A
1	„ „	57
4	„ „	90A
2	„ „	100



Model No. 1.95 Band Saw

Parts required :

2	of No.	1
2	„ „	2
2	„ „	5
2	„ „	16
1	„ „	19B
1	„ „	19S
2	„ „	22
6	„ „	35
18	„ „	37
3	„ „	48A
1	„ „	52
2	„ „	90A
2	„ „	126A

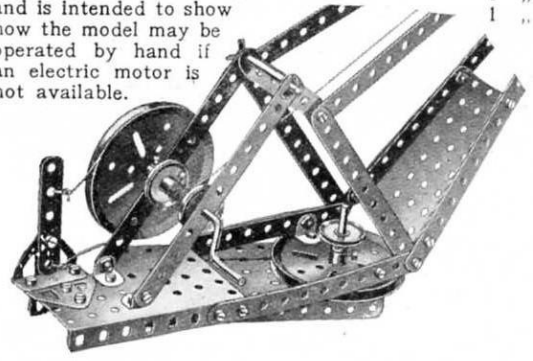


Model No. 1.93
Swivelling Jib Crane, Hand Operated

This illustrates an alternative construction of the base of model No. 1.92, and is intended to show how the model may be operated by hand if an electric motor is not available.

Parts required :

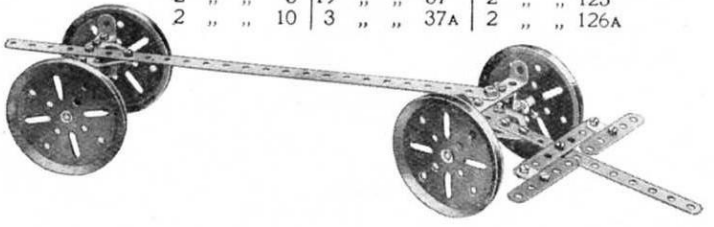
4	of No.	1	4	of No.	12
6	„ „	2	2	„ „	17
1	„ „	5	1	„ „	18A
1	„ „	11	2	„ „	19B
			1	„ „	19S
			4	„ „	22
			1	„ „	23
			1	„ „	24
			4	„ „	35
			32	„ „	37
			4	„ „	38
			1	„ „	48
			1	„ „	48A
			1	„ „	52
			2	„ „	54
			1	„ „	57
			1	„ „	126
			1	„ „	126A



Model No. 1.96 Timber Drag

Parts required :

1	of No.	1	2	of No.	11	4	of No.	48A
1	„ „	2	2	„ „	16	3	„ „	111C
1	„ „	3	4	„ „	19B	2	„ „	125
2	„ „	5	19	„ „	37	2	„ „	126A
2	„ „	10	3	„ „	37A			



Model No. 1.97 Bow and Arrow

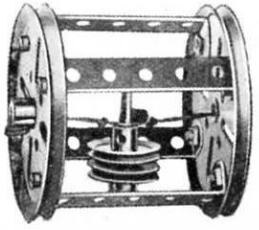
Parts required :

1 of No. 1 | 1 of No. 16

Model No. 1.98 Cum Bak

Parts required :

1	of No.	18A
2	„ „	19B
2	„ „	22
1	„ „	23
1	„ „	35
8	„ „	37
4	„ „	48A

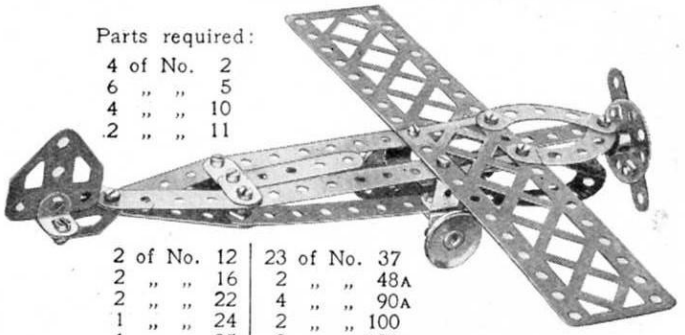


A short length of elastic is doubled and stretched between the centres of the 3″ pulley wheels. A weight, consisting of two 1″ fast pulley wheels and a 1½″ rod, is suspended from it in the middle of the drum. When the Cum Bak is rolled along any smooth level surface, the elastic becomes twisted and stores 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. 1.99 Aeroplane

Parts required :

4	of No.	2
6	„ „	5
4	„ „	10
2	„ „	11
2	of No.	12
2	„ „	16
2	„ „	22
1	„ „	24
1	„ „	35
23	of No.	37
2	„ „	48A
4	„ „	90A
2	„ „	100
2	„ „	126A

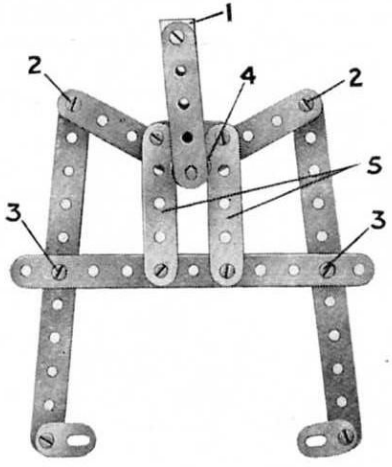


Model No. 1.100 Friction Grip Tongs

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.

Parts required :

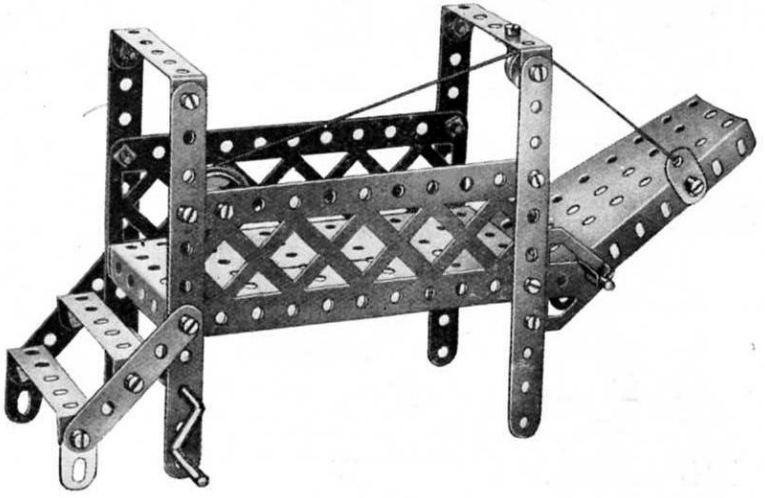
3	of No.	2
8	„ „	5
4	„ „	10
1	of No.	11
1	„ „	23
2	„ „	35
12	of No.	37



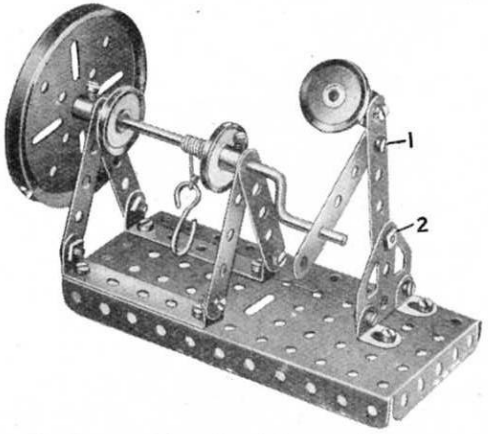
Model No. 1.101 Gangway

Parts required :

4	of No.	2
2	„ „	5
3	„ „	10
1	„ „	12
1	of No.	16
1	„ „	22
1	„ „	23
4	„ „	35
22	of No.	37
4	„ „	48A
1	„ „	52
1	„ „	54
2	of No.	100
1	„ „	111c
2	„ „	126A



Model No. 1.102 Windlass



Parts required :

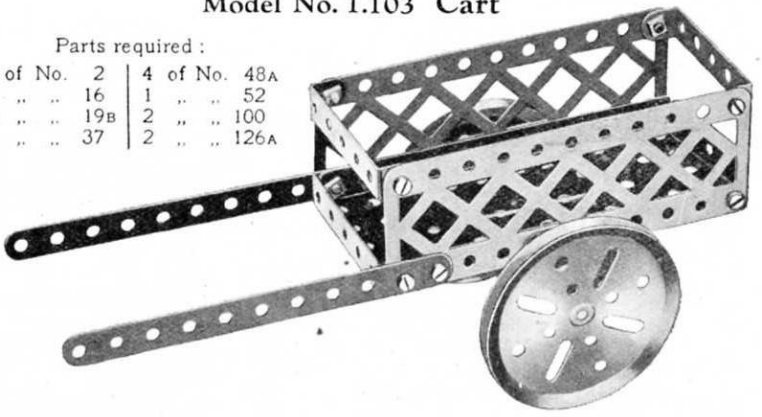
6	of No.	5
3	„ „	12
1	„ „	19B
1	„ „	19S
3	„ „	22
15	„ „	37
4	„ „	37A
2	„ „	48A
1	„ „	52
1	„ „	57
3	„ „	111C
1	„ „	126A

The figure at the right of the model is arranged to work to and fro when the crank handle is rotated. The bolts 1 and 2 are both secured by two nuts as in Standard Mechanism No. 262.

Model No. 1.103 Cart

Parts required :

2	of No.	2	4	of No.	48A
1	„ „	16	1	„ „	52
2	„ „	19B	2	„ „	100
14	„ „	37	2	„ „	126A

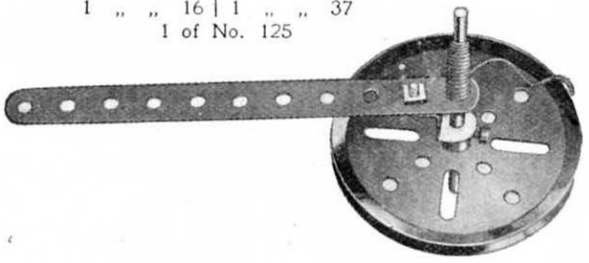


Model No. 1.104 Top

Parts required :

1	of No.	2	1	of No.	19B
1	„ „	16	1	„ „	37

1 of No. 125



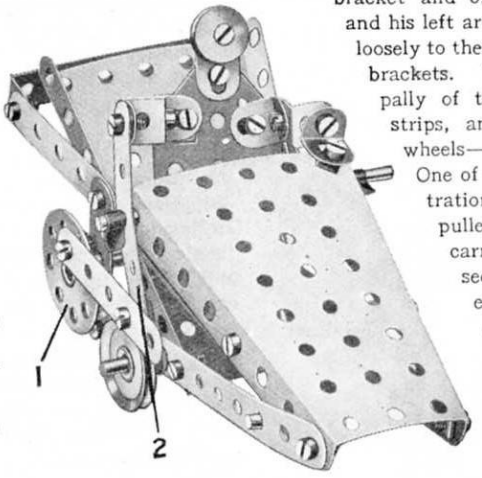
To spin the top wind a length of cord round the rod, as shown, place on a smooth surface and give the cord a sharp pull. When the cord is clear of the rod remove the 5½″ strip and the top will continue to spin for a considerable period.

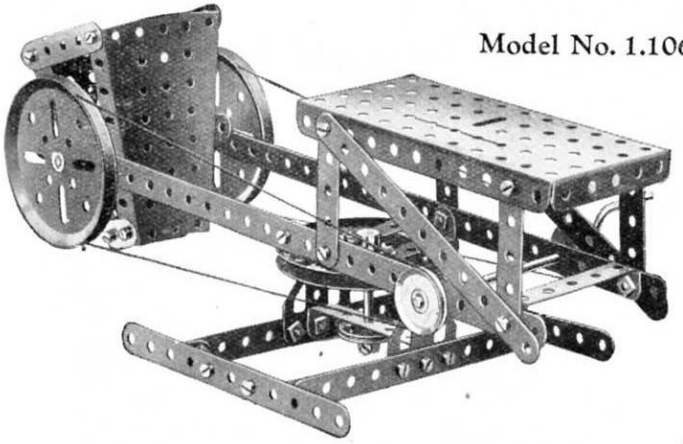
Model No. 1.105 The Invalid

When wheeled along the table the "invalid" appears to push himself energetically along. His neck is a flat bracket; his right (or propelling) arm consists of one angle bracket and one ½″ 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 2½″ strip is pivoted at one end to this bush wheel and at the other end to a second 2½″ strip 2, which, rocking about an axle journalled through its centre hole, is again pivoted to the invalid's hands.

Parts required :

4	of No.	2
6	„ „	5
1	„ „	10
4	„ „	12
3	„ „	16
1	„ „	17
4	„ „	22
1	„ „	23
1	„ „	24
4	„ „	35
24	„ „	37
4	„ „	37A
3	„ „	38
2	„ „	48A
2	„ „	54
1	„ „	125
1	„ „	126A





Model No. 1.106 Giant Foundry Ladle

Parts required :

2	of	No.	1	1	of	No.	23
6	„	„	2	1	„	„	24
7	„	„	5	36	„	„	37
2	„	„	10	6	„	„	37A
1	„	„	16	7	„	„	48A
1	„	„	17	1	„	„	52
3	„	„	19B	2	„	„	54
1	„	„	19S	6	„	„	111C
3	„	„	22	2	„	„	126A

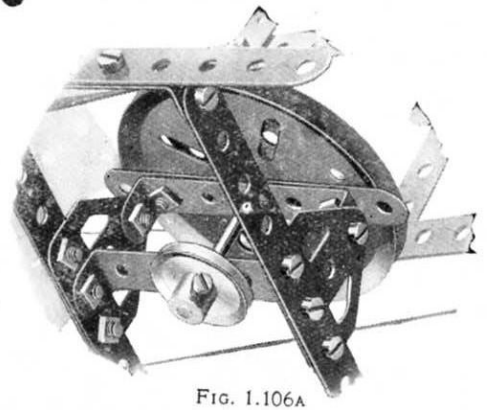
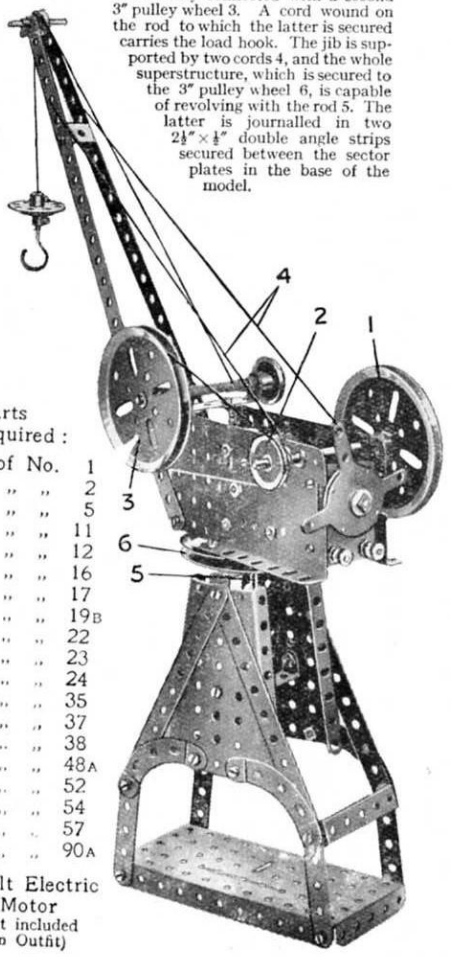


FIG. 1.106A

Model No. 1.107 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, which is secured to the 3″ pulley wheel 6, is capable of revolving with the rod 5. The latter is journalled in two $2\frac{1}{2}'' \times \frac{1}{2}''$ double angle strips secured between the sector plates in the base of the model.

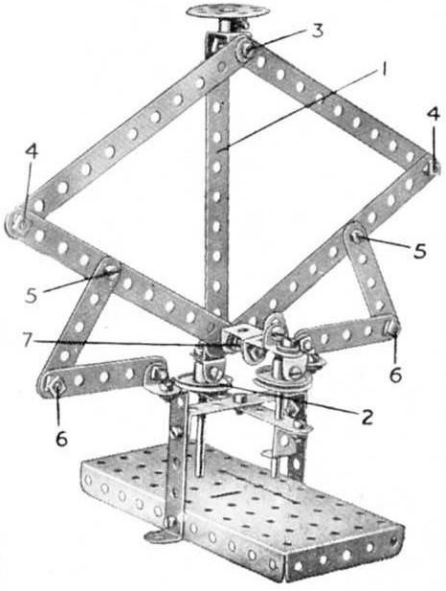


Parts required :

2	of	No.	1
4	„	„	2
4	„	„	5
1	„	„	11
2	„	„	12
3	„	„	16
1	„	„	17
3	„	„	19B
4	„	„	22
1	„	„	23
1	„	„	24
5	„	„	35
26	„	„	37
2	„	„	38
5	„	„	48A
1	„	„	52
2	„	„	54
1	„	„	57
4	„	„	90A

4-volt Electric Motor (not included in Outfit)

Model No. 1.108 Double-Action Pump

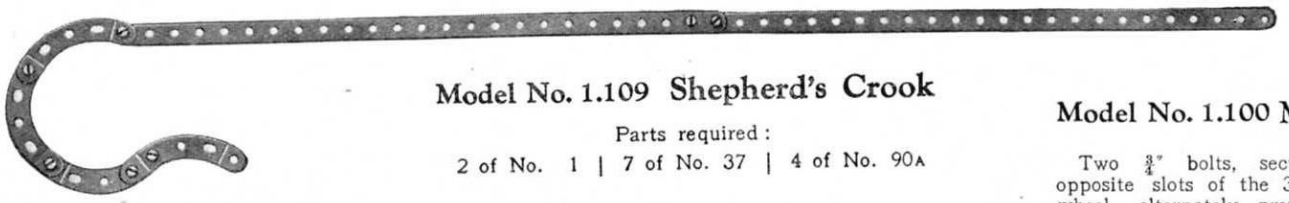


Parts required :

5	of	No.	2
1	„	„	3
4	„	„	5
2	„	„	11
6	„	„	12
2	„	„	17
2	„	„	22
1	„	„	24
21	„	„	37
6	„	„	37A
4	„	„	38
3	„	„	48A
1	„	„	52
6	„	„	111C
2	„	„	125

Double-Action Pump

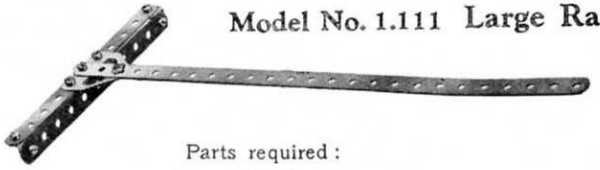
The $5\frac{1}{2}''$ strip 1 is attached to the 1″ pulley wheel 2 by means of two angle brackets, through the lower of which passes the set-screw that secures the pulley to its 2″ rod. Two washers are placed beneath the head of the bolt joining the angle brackets in order to prevent its shank from binding on the boss of the pulley 2. The joints 3, 4, 5, 6, 7, are all 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. 1.109 Shepherd's Crook

Parts required :

2 of No. 1 | 7 of No. 37 | 4 of No. 90A

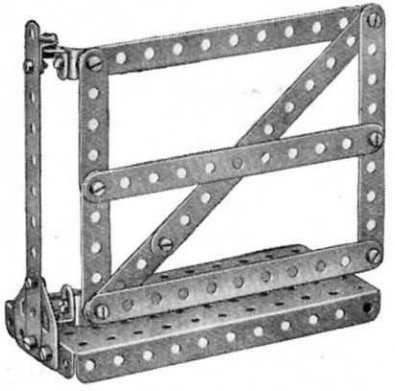


Model No. 1.111 Large Rake

Parts required :

1 of No.	1	2 of No.	12
2 „ „	2	8 „ „	37
1 of No.	126A		

Model No. 1.112 Gate



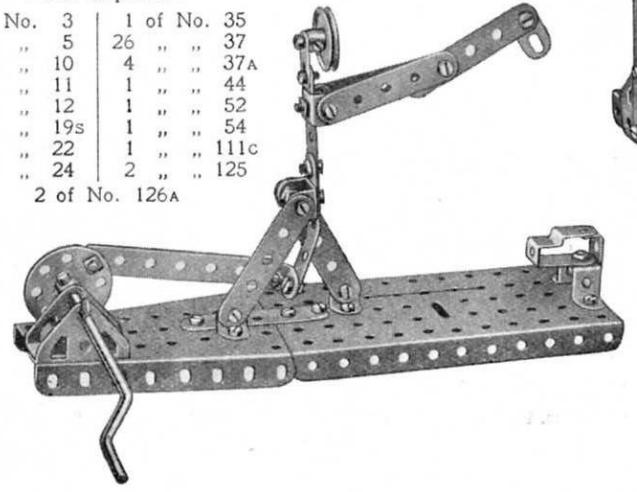
Parts required :

6 of No.	2
3 „ „	5
5 „ „	12
13 „ „	37
4 „ „	37A
1 „ „	52
2 „ „	111C
1 „ „	126A

Model No. 1.113 Blacksmith

Parts required :

1 of No.	3	1 of No.	35
8 „ „	5	26 „ „	37
2 „ „	10	4 „ „	37A
2 „ „	11	1 „ „	44
5 „ „	12	1 „ „	52
1 „ „	19S	1 „ „	54
1 „ „	22	1 „ „	111C
1 „ „	24	2 „ „	125
2 of No.	126A		

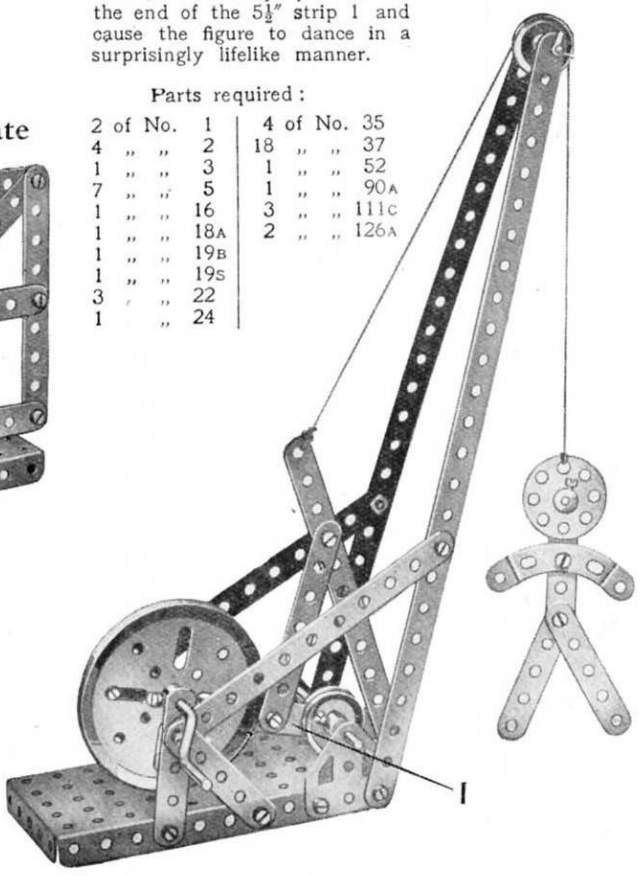


Model No. 1.100 Meccano Dancer

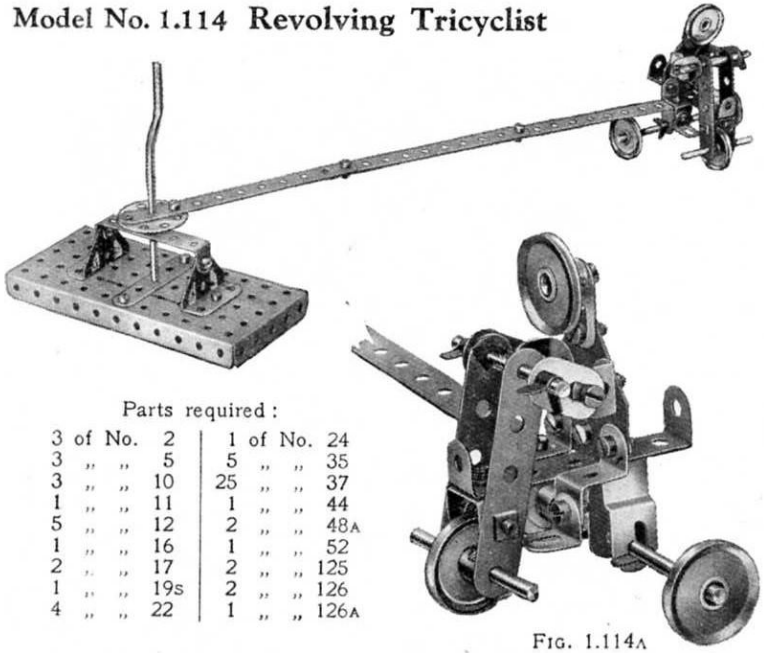
Two $\frac{3}{4}$" bolts, secured in opposite slots of the 3" pulley wheel, alternately press down the end of the $5\frac{1}{2}$" strip 1 and cause the figure to dance in a surprisingly lifelike manner.

Parts required :

2 of No.	1	4 of No.	35
4 „ „	2	18 „ „	37
1 „ „	3	1 „ „	52
7 „ „	5	1 „ „	90A
1 „ „	16	3 „ „	111C
1 „ „	18A	2 „ „	126A
1 „ „	19B		
1 „ „	19S		
3 „ „	22		
1 „ „	24		



Model No. 1.114 Revolving Tricyclist



Parts required :

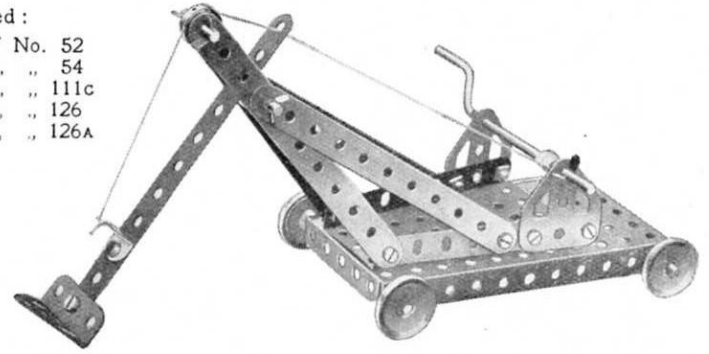
3	of No.	2	1	of No.	24
3	„ „	5	5	„ „	35
3	„ „	10	25	„ „	37
1	„ „	11	1	„ „	44
5	„ „	12	2	„ „	48A
1	„ „	16	1	„ „	52
2	„ „	17	2	„ „	125
1	„ „	19s	2	„ „	126
4	„ „	22	1	„ „	126A

FIG. 1.114A

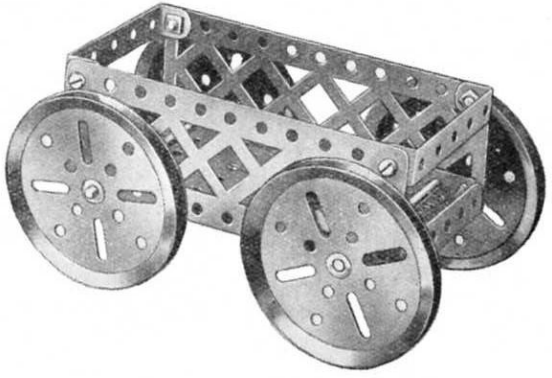
Model No. 1.115 Steam Shovel

Parts required :

5	of No.	2	1	of No.	52
1	„ „	11	1	„ „	54
1	„ „	12	1	„ „	111c
2	„ „	16	1	„ „	126
2	„ „	18A	2	„ „	126A
1	„ „	19s			
4	„ „	22			
1	„ „	23			
6	„ „	35			
12	„ „	37			
2	„ „	37A			
2	„ „	38			



Model No. 1.116 Truck



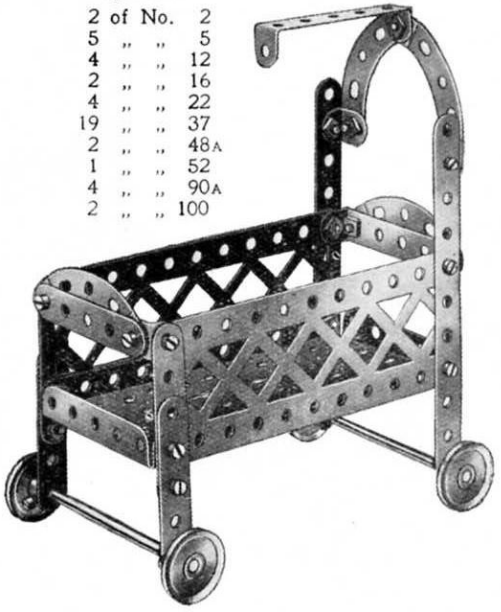
Parts required :

2	of No.	16
4	„ „	19B
8	„ „	37
2	„ „	48A
1	„ „	52
2	„ „	100

Model No. 1.117 Cot on Wheels

Parts required :

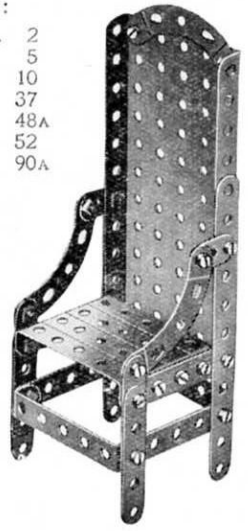
2	of No.	2
5	„ „	5
4	„ „	12
2	„ „	16
4	„ „	22
19	„ „	37
2	„ „	48A
1	„ „	52
4	„ „	90A
2	„ „	100



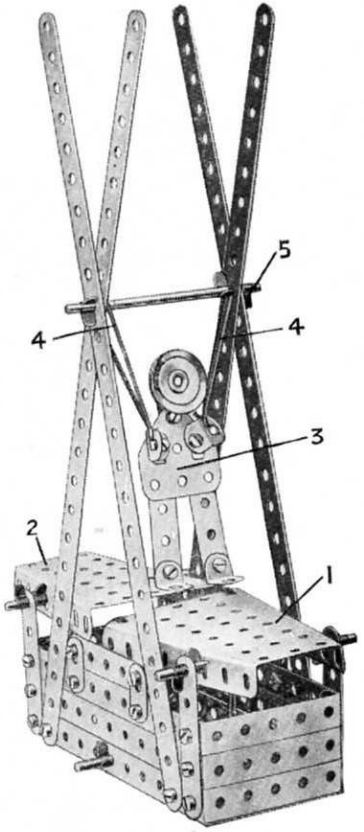
Model No. 1.118 Chair

Parts required :

2	of No.	2
8	„ „	5
2	„ „	10
22	„ „	37
6	„ „	48A
1	„ „	52
3	„ „	90A



Model No. 1.119 A Sudden Appearance



Parts required :

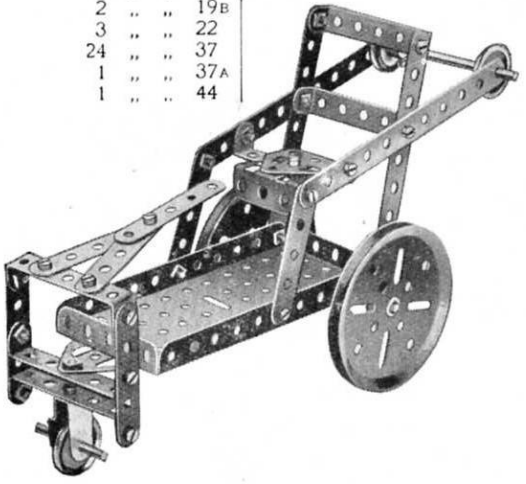
4	of No.	1	14	of No.	35
4	„ „	2	29	„ „	37
9	„ „	5	6	„ „	48A
5	„ „	10	1	„ „	52
4	„ „	12	2	„ „	54
4	„ „	16	1	„ „	111C
1	„ „	22	1	„ „	126A

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 the ends of screws at the bottom 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 1 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 3½" axle rod 5.

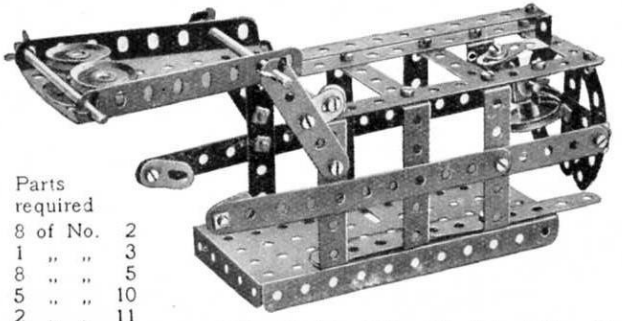
Model No. 1.121 Bath Chair

Parts required :

4	of No.	2	6	of No.	48A
7	„ „	5	1	„ „	52
2	„ „	16	1	„ „	126
1	„ „	18A	2	„ „	126A
2	„ „	19B			
3	„ „	22			
24	„ „	37			
1	„ „	37A			
1	„ „	44			



Model No. 1.120 Rat Trap



Parts required

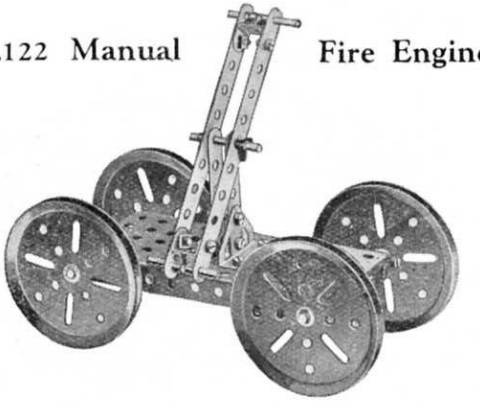
8	of No.	2						
1	„ „	3						
8	„ „	5						
5	„ „	10						
2	„ „	11						
6	„ „	12	1	of No.	23	1	of No. 38	1	of No. 54
2	„ „	16	1	„ „	24	1	„ „ 48	1	„ „ 57
1	„ „	17	8	„ „	35	6	„ „ 48A	2	„ „ 90A
3	„ „	22	31	„ „	37	1	„ „ 52	3	„ „ 111C

The " bait " consists of a 1" fast pulley and a ½" loose pulley suspended by means of a hook from a double bracket. The latter is bolted to a 1½" × ½" 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 5½" 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 5½" strips that are bolted to the trap by their extreme ends and act as springs.

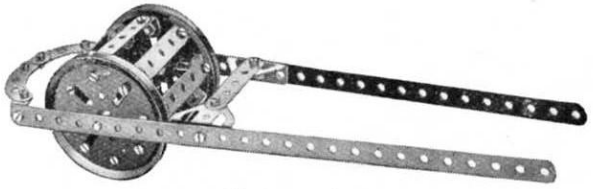
Model No. 1.122 Manual Fire Engine

Parts required :

2	of No.	2
2	„ „	5
2	„ „	11
2	„ „	16
2	„ „	17
1	„ „	18A
4	„ „	19B
6	„ „	35
12	„ „	37
2	„ „	38
1	„ „	52
2	„ „	126



Model No. 1.123 Field Roller



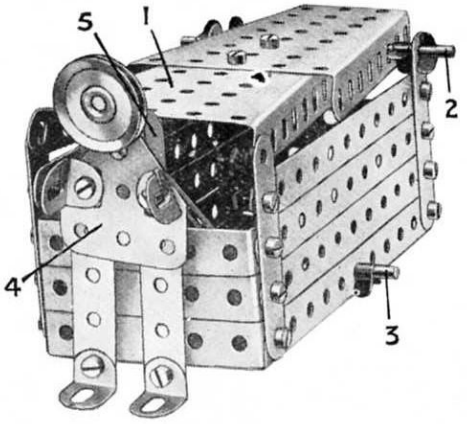
Parts required :

2 of No. 1	1 of No. 16	6 of No. 48A
3 „ „ 5	2 „ „ 19B	2 „ „ 90A
6 „ „ 12	30 „ „ 37	2 „ „ 126

Model No. 1.124 Disappearing Meccanitian

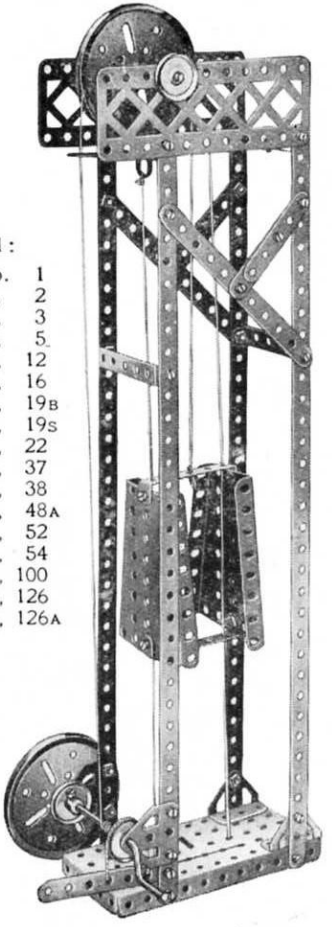
Parts required :

6 of No. 2	23 of No. 37
6 „ „ 5	1 „ „ 44
1 „ „ 10	6 „ „ 48A
4 „ „ 12	1 „ „ 52
2 „ „ 16	2 „ „ 54
1 „ „ 22	1 „ „ 111C
6 „ „ 35	1 „ „ 126A



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. 1.125 Elevator



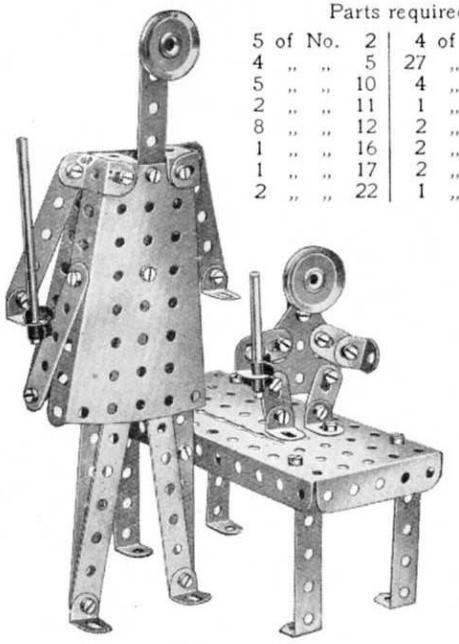
Parts required :

4 of No. 1	2 of No. 48A
7 „ „ 2	1 „ „ 52
1 „ „ 3	2 „ „ 54
4 „ „ 5	2 „ „ 100
1 „ „ 12	2 „ „ 126
1 „ „ 16	2 „ „ 126A
2 „ „ 19B	
1 „ „ 19S	
4 „ „ 22	
33 „ „ 37	
3 „ „ 38	
6 „ „ 48A	

Model No. 1.126 Dignity and Impudence

Parts required :

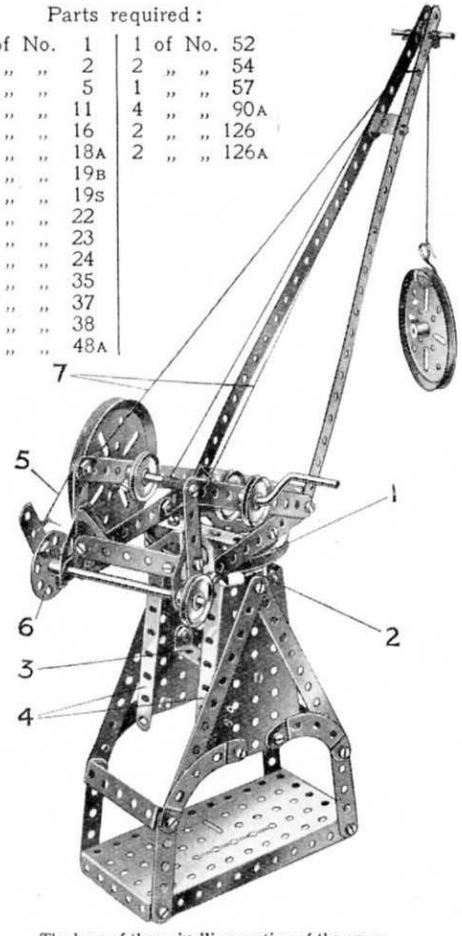
5 of No. 2	4 of No. 35
4 „ „ 5	27 „ „ 37
5 „ „ 10	4 „ „ 48A
2 „ „ 11	1 „ „ 52
8 „ „ 12	2 „ „ 54
1 „ „ 16	2 „ „ 111C
1 „ „ 17	2 „ „ 125
2 „ „ 22	1 „ „ 126A



Model No. 1.127 Elevated Crane

Parts required :

2	of No.	1	1	of No.	52
8	„ „	2	2	„ „	54
8	„ „	5	1	„ „	57
1	„ „	11	4	„ „	90A
2	„ „	16	2	„ „	126
1	„ „	18A	2	„ „	126A
3	„ „	19B			
1	„ „	19S			
4	„ „	22			
1	„ „	23			
1	„ „	24			
3	„ „	35			
36	„ „	37			
3	„ „	38			
4	„ „	48A			

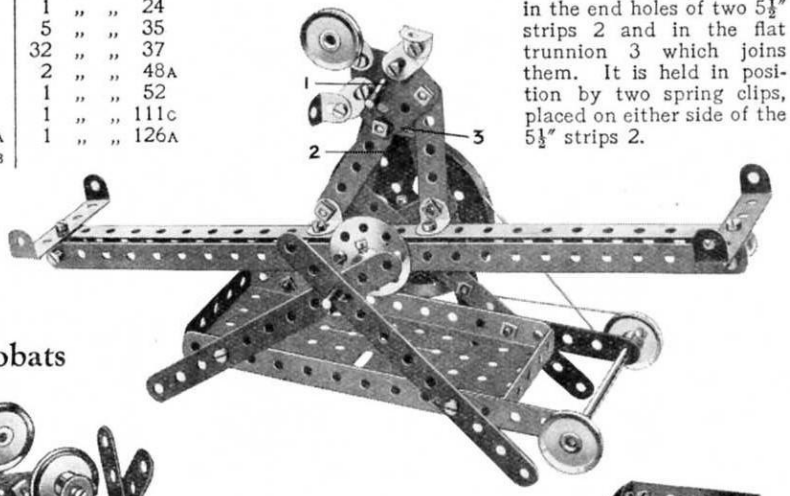


The base of the swivelling portion of the crane consists of a 3" pulley wheel 1, which has a 3½" axle rod nipped in its boss. The rod is journalled in two 2½" double angle strips 2 and 3 secured between the sector plates 4. The brake cord 5 passes round the 3" pulley as shown, and is tied to one of the holes in the bush wheel 6. The cords 7 serve merely to support the weight of the jib.

Model No. 1.128 Acrobat on See-Saw

Parts required :

3	of No.	1	3	of No.	22
6	„ „	2	1	„ „	24
4	„ „	5	5	„ „	35
3	„ „	10	32	„ „	37
2	„ „	11	2	„ „	48A
4	„ „	12	1	„ „	52
2	„ „	16	1	„ „	111C
1	„ „	18A	1	„ „	126A
1	„ „	19B			

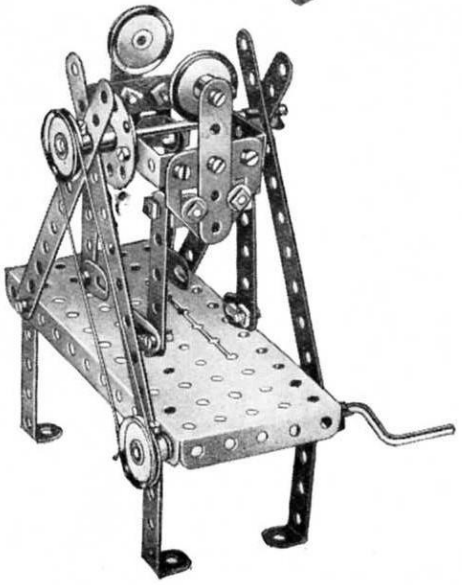


The 1" rod 1 is journalled in the end holes of two 5½" strips 2 and in the flat trunnion 3 which joins them. It is held in position by two spring clips, placed on either side of the 5½" strips 2.

Model No. 1.129 Acrobats

Parts required :

4	of No.	2
6	„ „	5
4	„ „	10
4	„ „	12
1	„ „	16
1	„ „	19S
4	„ „	22
1	„ „	24
3	„ „	35
24	„ „	37
5	„ „	38
6	„ „	48A
1	„ „	52
2	„ „	126A

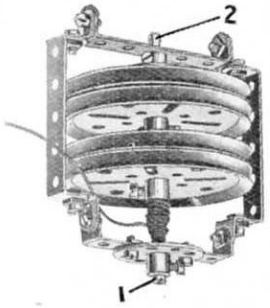


Model No. 1.130 Umpire's Seat

Parts required :

6	of No.	2
7	„ „	5
2	„ „	10
4	„ „	12
24	„ „	37
3	„ „	48A
2	„ „	90A
2	„ „	126

Model No. 1.131 Gyroscope



Parts required:

4	of No.	12
1	„ „	16
4	„ „	19B
1	„ „	24
10	„ „	37
4	„ „	48A

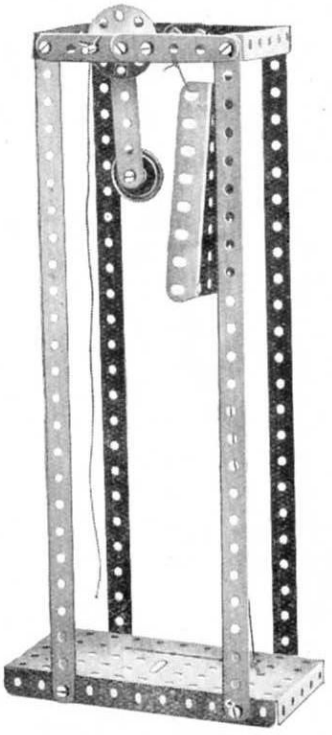
The 7/32″ bolt 1 is gripped by the set-screw of the bush wheel. The lower end of the rod 2 of the Gyroscope enters the boss of the bush wheel and rests on the shank of the bolt 1.

Model No. 1.132 Bicycle

Parts required:

1	of No.	3
7	„ „	5
2	„ „	10
2	„ „	11
4	„ „	12
2	„ „	17
1	„ „	18A
2	„ „	19B
2	„ „	22
1	„ „	24
4	„ „	35
13	„ „	37
4	„ „	37A
3	„ „	38
2	„ „	90A
4	„ „	111C
2	„ „	125
1	„ „	126A

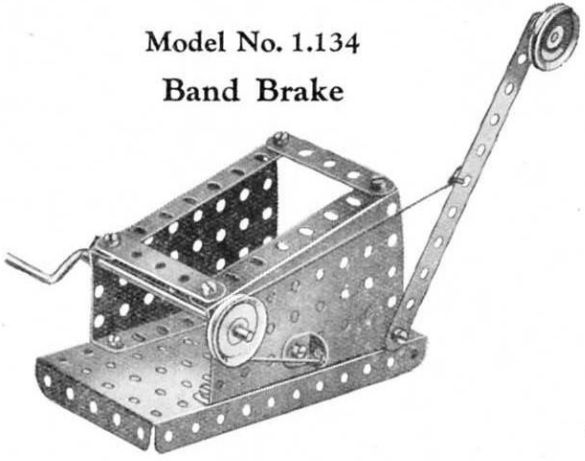
Model No. 1.133 Fire Alarm



Parts required:

4	of No.	1	1	of No.	24
1	„ „	3	2	„ „	35
4	„ „	5	13	„ „	37
1	„ „	16	2	„ „	48A
1	„ „	22	1	„ „	52
			1	of No.	54

Model No. 1.134 Band Brake



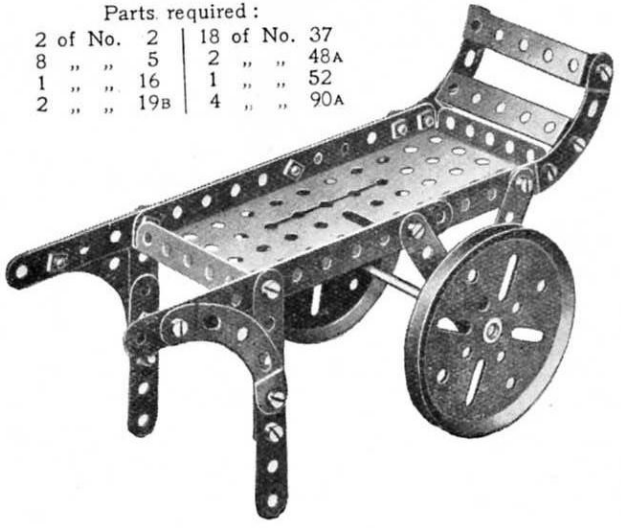
Parts required:

1	of No.	2	1	of No.	19s	1	of No.	52
2	„ „	5	2	„ „	22	2	„ „	54
1	„ „	12	1	„ „	35	1	„ „	111c
			10	„ „	37			

Model No. 1.135 Luggage Truck

Parts required:

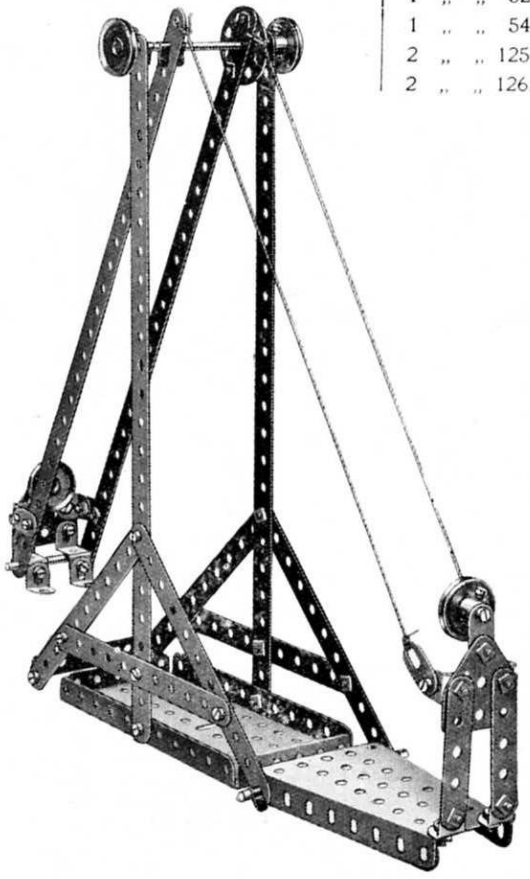
2	of No.	2	18	of No.	37
8	„ „	5	2	„ „	48A
1	„ „	16	1	„ „	52
2	„ „	19B	4	„ „	90A



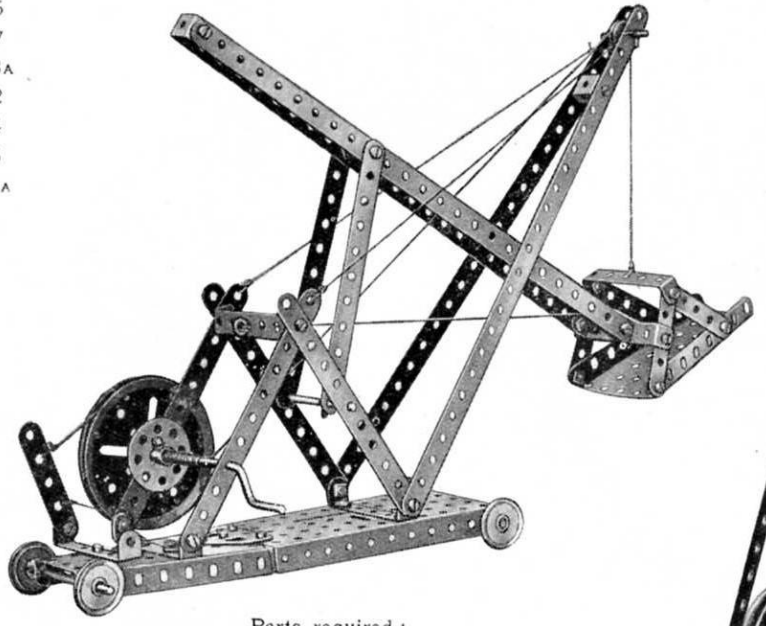
Model No. 1.136 Boy on Swing

Parts required :

4 of No.	1	8 of No.	12	1 of No.	24
6 „ „	2	2 „ „	16	7 „ „	35
2 „ „	5	1 „ „	17	35 „ „	37
5 „ „	10	4 „ „	22	1 „ „	48A
				1 „ „	52
				1 „ „	54
				2 „ „	125
				2 „ „	126A



Model No. 1.137 Mechanical Shovel



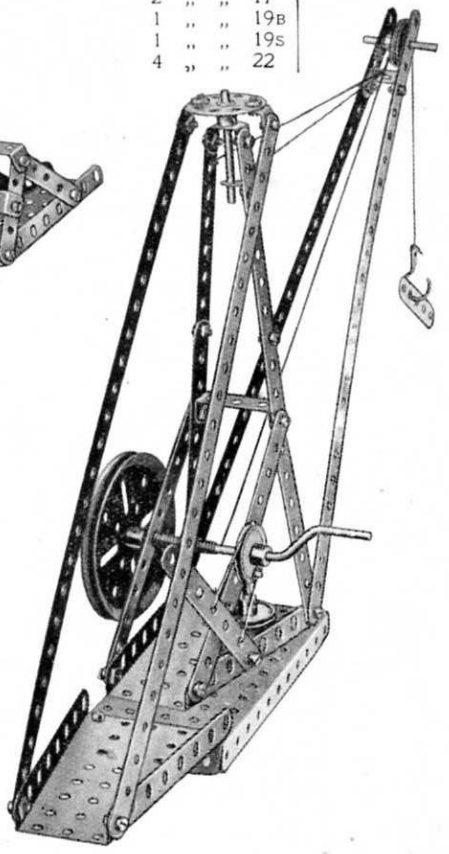
Parts required :

4 of No.	1	1 of No.	24
6 „ „	2	6 „ „	35
5 „ „	5	35 „ „	37
2 „ „	11	1 „ „	37A
3 „ „	16	1 „ „	38
1 „ „	18A	1 „ „	48
1 „ „	19B	6 „ „	48A
1 „ „	19S	1 „ „	52
4 „ „	22	2 „ „	54
1 „ „	23	1 „ „	126A

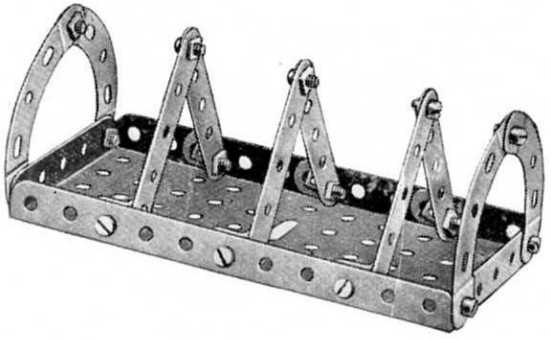
Model No. 1.138 Jib Crane

Parts required :

4 of No.	1	1 of No.	24
6 „ „	2	23 „ „	37
1 „ „	3	1 „ „	48
1 „ „	5	1 „ „	52
2 „ „	11	2 „ „	54
3 „ „	12	1 „ „	57
1 „ „	16		
2 „ „	17		
1 „ „	19B		
1 „ „	19S		
4 „ „	22		



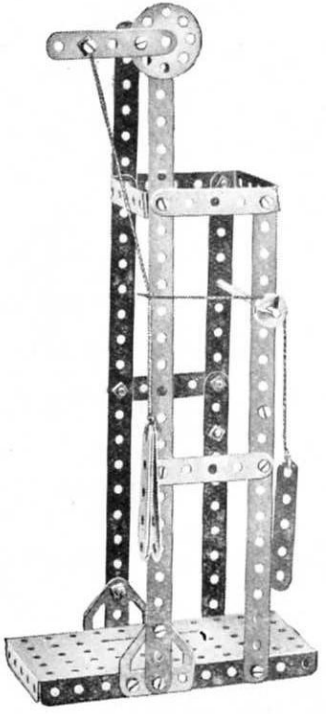
Model No. 1.139 Toast Rack



Parts required :

6	of No.	5
6	„ „	12
21	„ „	37
1	„ „	52
4	„ „	90A

Model No. 1.140 Crosshead Demonstration Model

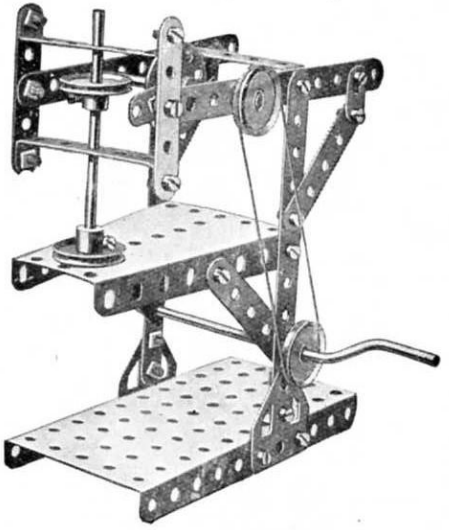


This is an apparatus for determining the forces that act at the crosshead of a reciprocating engine. The upper inclined length of cord represents the connecting rod and the lower, or vertical portion, the piston rod. The pull on the third cord indicates the pressure exerted on the slide bars of the engine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

Model No. 1.141 Drop Stamp

Parts required :

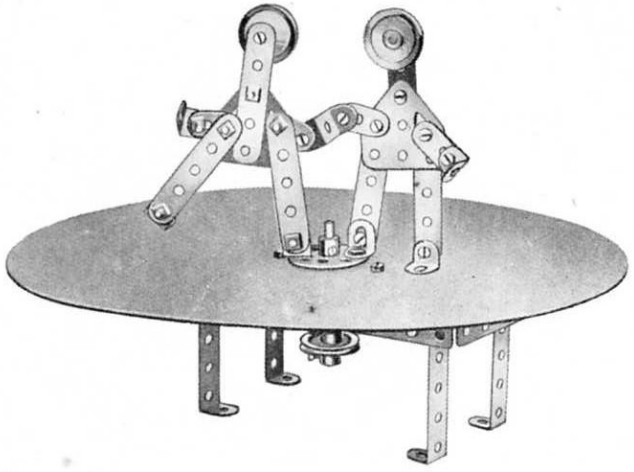
4	of No.	2
6	„ „	5
3	„ „	10
2	„ „	16
1	„ „	19
4	„ „	22
1	„ „	34
2	„ „	35
27	„ „	37
3	„ „	48A
1	„ „	52
1	„ „	54
2	„ „	126A



Model No. 1.142 Eccentric Dancers

Parts required :

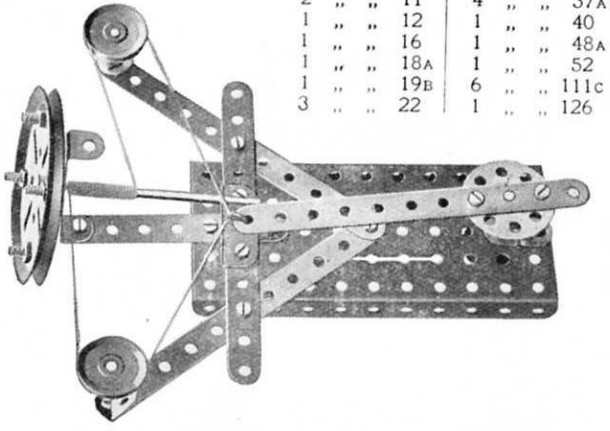
6	of No.	5
4	„ „	10
6	„ „	12
4	of No.	22
1	„ „	23
20	„ „	37
4	„ „	48A
2	of No.	111c
1	„ „	125
2	„ „	126A



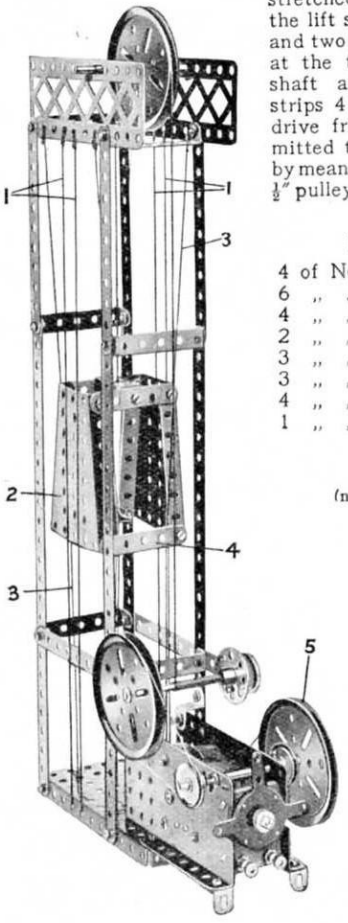
Model No. 1.143 Boat Steering Gear

Parts required :

4	of No.	2
1	„ „	3
2	„ „	11
1	„ „	12
1	„ „	16
1	„ „	18A
1	„ „	19B
3	„ „	22
1	of No.	24
14	„ „	37
4	„ „	37A
1	„ „	40
1	„ „	48A
1	„ „	52
6	„ „	111c
1	„ „	126



Model No. 1.144 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 2½" 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 ½" pulley on the motor armature.

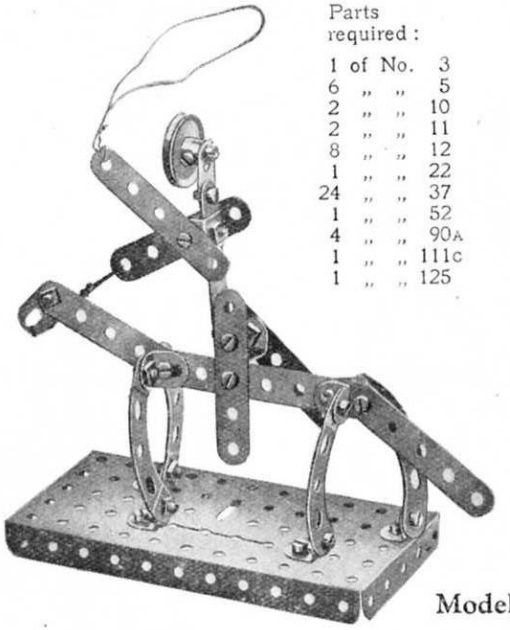
Parts required :

4	of No.	1	3	of No.	35
6	„ „	2	34	„ „	37
4	„ „	5	1	„ „	38
2	„ „	12	1	„ „	48
3	„ „	16	6	„ „	48A
3	„ „	19B	1	„ „	52
4	„ „	22	2	„ „	54
1	„ „	24	2	„ „	100

2 of No. 125

Electric Motor
(not included in Outfit)

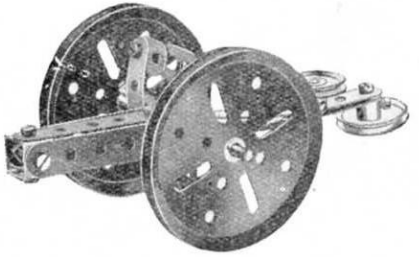
Model No. 1.145 Mounted Cowboy



Parts required :

1	of No.	3
6	„ „	5
2	„ „	10
2	„ „	11
8	„ „	12
1	„ „	22
24	„ „	37
1	„ „	52
4	„ „	90A
1	„ „	111c
1	„ „	125

Model No. 1.146 Howitzer



Parts required :

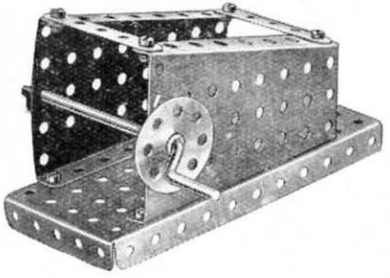
2	of No.	2	2	of No.	19B
6	„ „	5	2	„ „	22
4	„ „	10	2	„ „	35
2	„ „	11	14	„ „	37
4	„ „	12	2	„ „	38
1	„ „	16	2	„ „	111c

2 of No. 125

Model No. 1.147 Safety Catch for Winding Gear

Parts required :

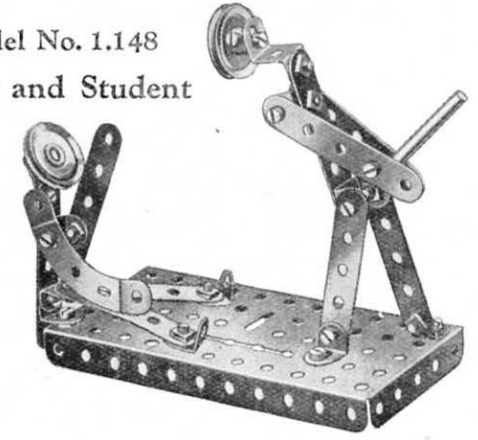
2	of No.	5
1	„ „	19S
1	„ „	24
1	„ „	35
8	„ „	37
1	„ „	37A
1	„ „	52
2	„ „	54
1	„ „	111c



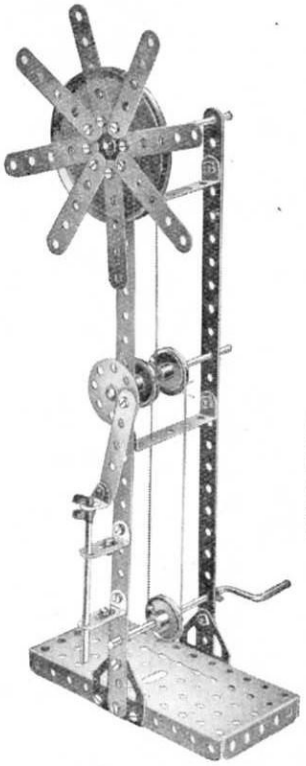
Model No. 1.148 Master and Student

Parts required :

9	of No.	5
1	„ „	10
2	„ „	11
8	„ „	12
2	„ „	22
20	„ „	37
3	„ „	37A
1	„ „	52
1	„ „	90A
4	„ „	111c
1	„ „	125



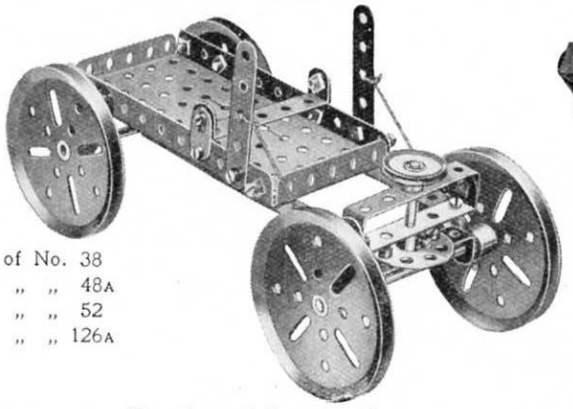
Model No. 1.149
Windmill Pump



Parts required :

2	of No.	1	1	of No.	24
9	„ „	5	4	„ „	35
2	„ „	10	24	„ „	37
3	„ „	12	4	„ „	37A
3	„ „	16	2	„ „	48A
1	„ „	19B	1	„ „	52
1	„ „	19S	2	„ „	111C
4	„ „	22	2	„ „	126A

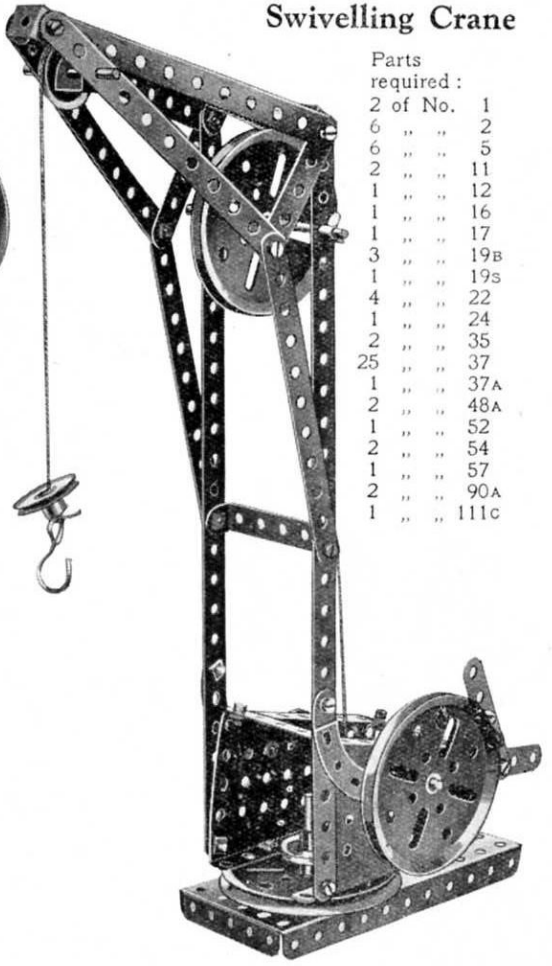
Model No. 1.150 Coaster



Parts required :

2	of No.	2	6	of No.	38
2	„ „	5	4	„ „	48A
4	„ „	10	1	„ „	52
2	„ „	16	2	„ „	126A
1	„ „	18A			
4	„ „	19B			
1	„ „	22			
1	„ „	24			
22	„ „	37			
2	„ „	37A			

Model No. 1.151
Swivelling Crane

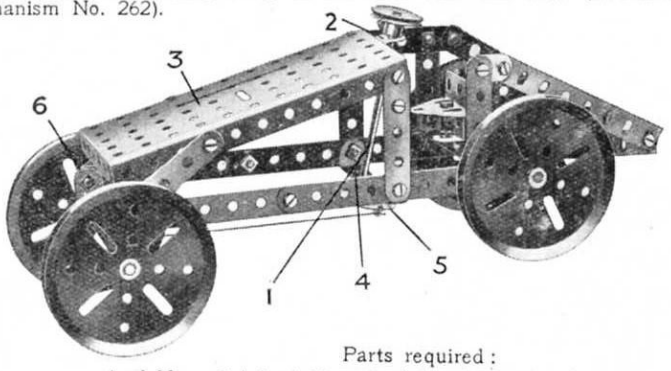


Parts required :

2	of No.	1
6	„ „	2
6	„ „	5
2	„ „	11
1	„ „	12
1	„ „	16
1	„ „	17
3	„ „	19B
1	„ „	19S
4	„ „	22
1	„ „	24
2	„ „	35
25	„ „	37
1	„ „	37A
2	„ „	48A
1	„ „	52
2	„ „	54
1	„ „	57
2	„ „	90A
1	„ „	111C

Model No. 1.152 Racing Motor Car

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).

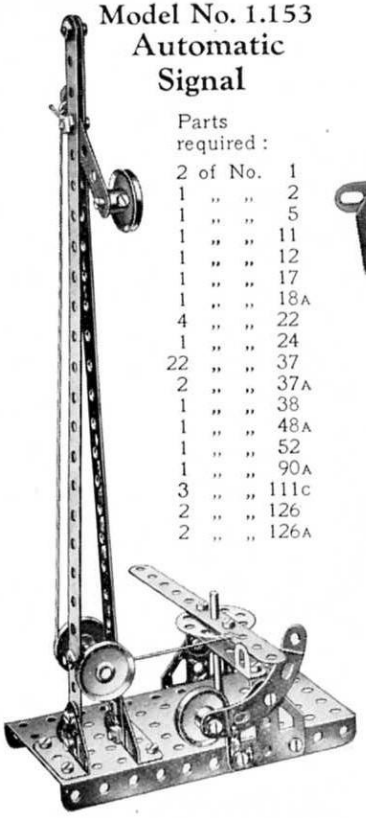


Parts required :

4	of No.	2	3	of No.	16	25	of No.	37	1	of No.	52
7	„ „	5	4	„ „	19B	2	„ „	37A	2	„ „	54
1	„ „	10	1	„ „	22	4	„ „	38	1	„ „	111C
1	„ „	11	1	„ „	24	4	„ „	48A	1	„ „	125

1 of No: 126

Model No. 1.153 Automatic Signal

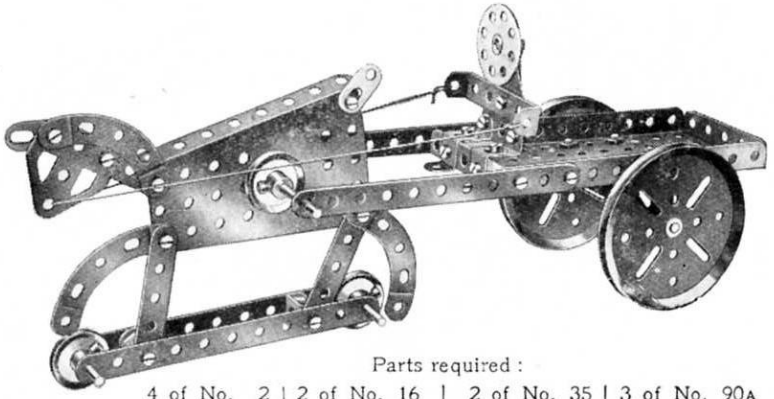


Parts required :

2	of No.		1
1	„	„	2
1	„	„	5
1	„	„	11
1	„	„	12
1	„	„	17
1	„	„	18A
4	„	„	22
1	„	„	24
22	„	„	37
2	„	„	37A
1	„	„	38
1	„	„	48A
1	„	„	52
1	„	„	90A
3	„	„	111C
2	„	„	126
2	„	„	126A

The weighted curved strip normally holds the end of the 5½″ 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 5½″ strip, and by means of the cord shown, raises the arm to indicate "danger." The curved strip moves to allow the end of the 5½″ 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.

Model No. 1.154 Horse and Cart

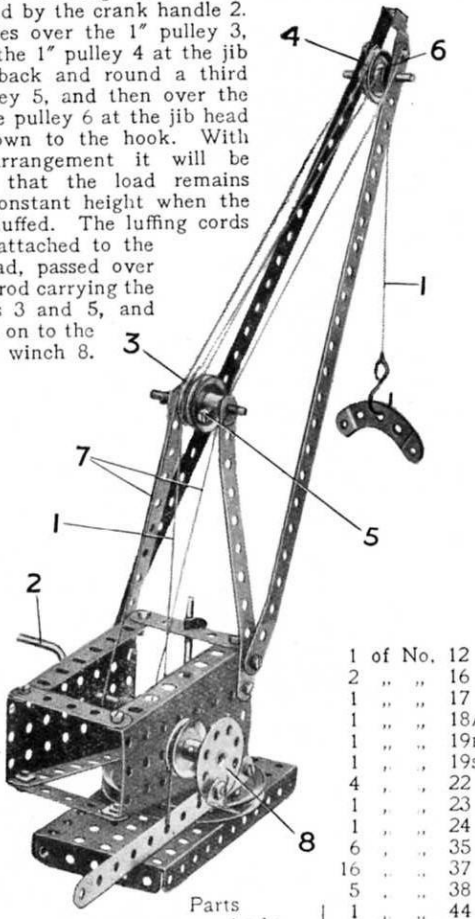


Parts required :

4	of No.	2	2	of No.	16	2	of No.	35	3	of No.	90A
3	„	„ 5	2	„	„ 18A	26	„	„ 37	1	„	„ 111C
3	„	„ 10	2	„	„ 19B	1	„	„ 48A	2	„	„ 125
2	„	„ 11	4	„	„ 22	1	„	„ 52	2	„	„ 126
2	„	„ 12	1	„	„ 24	1	„	„ 54	2	„	„ 126A

Model No. 1.155 Patent Luffing Crane

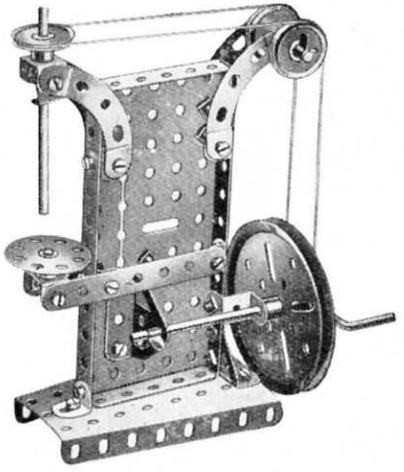
The hoisting cord 1 is operated by the crank handle 2. It passes over the 1″ pulley 3, round the 1″ pulley 4 at the jib head, back and round a third 1″ pulley 5, and then over the ½″ loose pulley 6 at the jib head and down to the hook. With this arrangement it will be found that the load remains at a constant height when the jib is luffed. The luffing cords 7 are attached to the jib head, passed over the 2″ rod carrying the pulleys 3 and 5, and wound on to the luffing winch 8.



Parts required :

2	of No.	1	1	of No.	12	1	of No.	44	1	of No.	90A
3	„	„ 2	2	„	„ 16	1	„	„ 52	2	„	„ 125
4	„	„ 5	1	„	„ 17	2	„	„ 54	2	„	„ 126
			1	„	„ 18A	1	„	„ 57	2	„	„ 126A
			1	„	„ 19B	2	„	„ 111C			
			1	„	„ 19S						
			4	„	„ 22						
			1	„	„ 23						
			1	„	„ 24						
			6	„	„ 35						
			16	„	„ 37						
			5	„	„ 38						

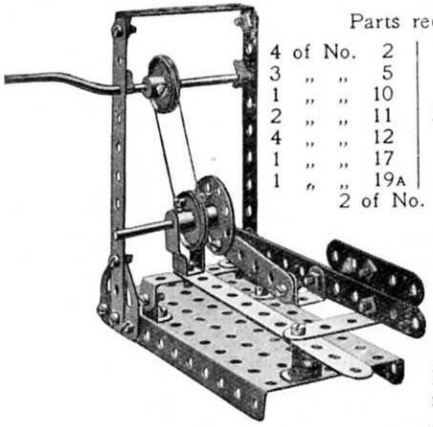
Model No. 1.156 Drill



Parts required :

1	of No.		3
2	„	„	11
6	„	„	12
1	„	„	16
1	„	„	18A
1	„	„	19B
1	„	„	19S
4	„	„	22
1	„	„	24
2	„	„	35
27	„	„	37
1	„	„	52
1	„	„	54
4	„	„	90A
1	„	„	125
2	„	„	126

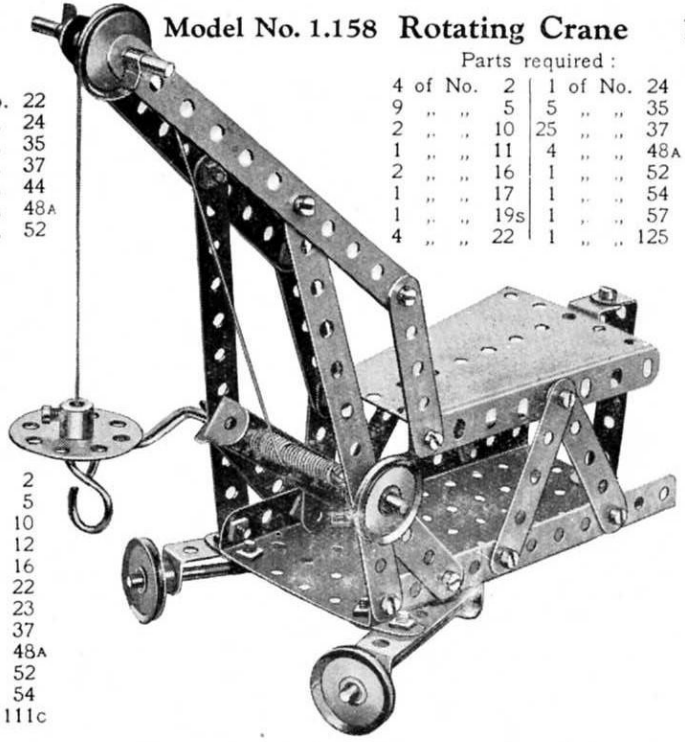
Model No. 1.157 Sawing Machine



Parts required :

4	of No.	2	2	of No.	22
3	„ „	5	1	„ „	24
1	„ „	10	2	„ „	35
2	„ „	11	22	„ „	37
4	„ „	12	1	„ „	44
1	„ „	17	2	„ „	48A
1	„ „	19A	1	„ „	52
	2	of No. 126A			

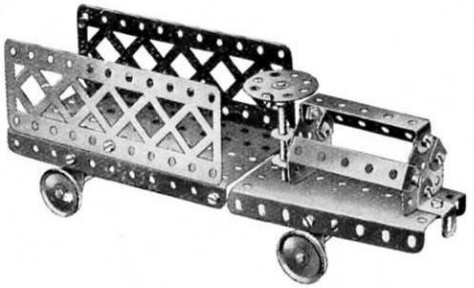
Model No. 1.158 Rotating Crane



Parts required :

4	of No.	2	1	of No.	24
9	„ „	5	5	„ „	35
2	„ „	10	25	„ „	37
1	„ „	11	4	„ „	48A
2	„ „	16	1	„ „	52
1	„ „	17	1	„ „	54
1	„ „	19S	1	„ „	57
4	„ „	22	1	„ „	125

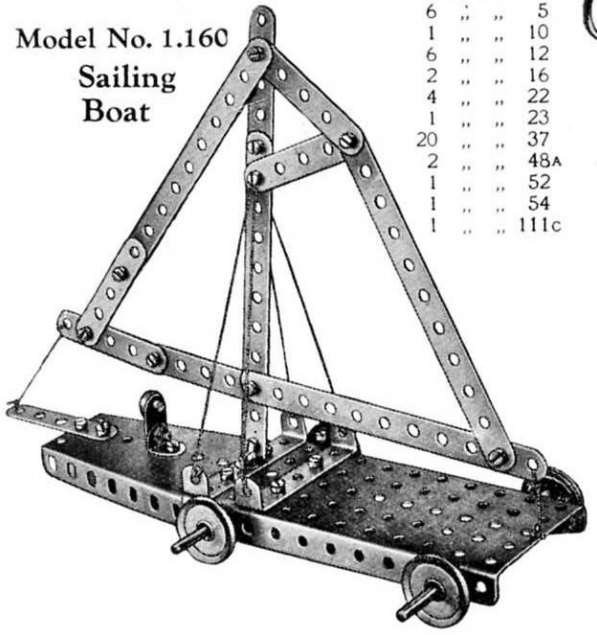
Model No. 1.159 Motor Lorry



Parts required :

2	of No.	5	1	of No.	17
4	„ „	10	4	„ „	22
1	„ „	11	1	„ „	24
2	„ „	12	1	„ „	35
2	„ „	16	23	„ „	37
			4	„ „	48A
1	of No.	52			
1	„ „	54			
2	„ „	100			
1	„ „	125			
2	„ „	126A			

Model No. 1.160 Sailing Boat

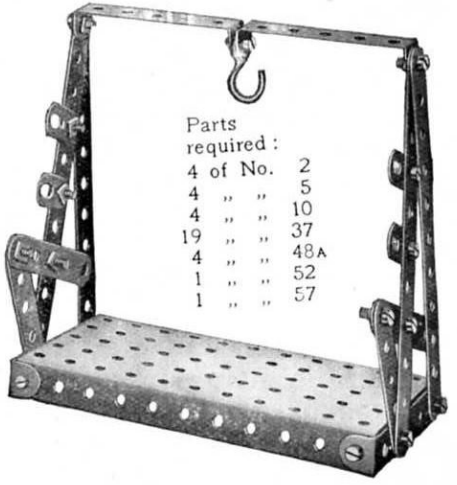


Parts required :

4	of No.	2
6	„ „	5
1	„ „	10
6	„ „	12
2	„ „	16
4	„ „	22
1	„ „	23
20	„ „	37
2	„ „	48A
1	„ „	52
1	„ „	54
1	„ „	111c

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 loosely 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. 1.161 Pen Rack



Parts required :

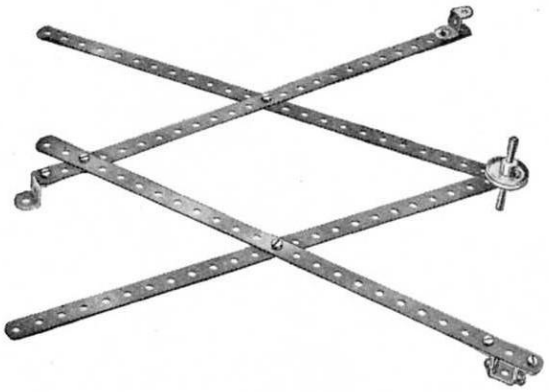
4	of No.	2
4	„ „	5
4	„ „	10
19	„ „	37
4	„ „	48A
1	„ „	52
1	„ „	57

Model No. 1.162 Revolving Gymnasts

Parts required :

2	of No.	1
1	„ „	2
8	„ „	5
2	„ „	10
2	„ „	11
10	„ „	12
1	„ „	16
2	„ „	17
4	„ „	22
1	„ „	24
4	„ „	35
29	„ „	37
5	„ „	38
4	„ „	48A
1	„ „	52
2	„ „	126A

Model No. 1.163 Pantograph

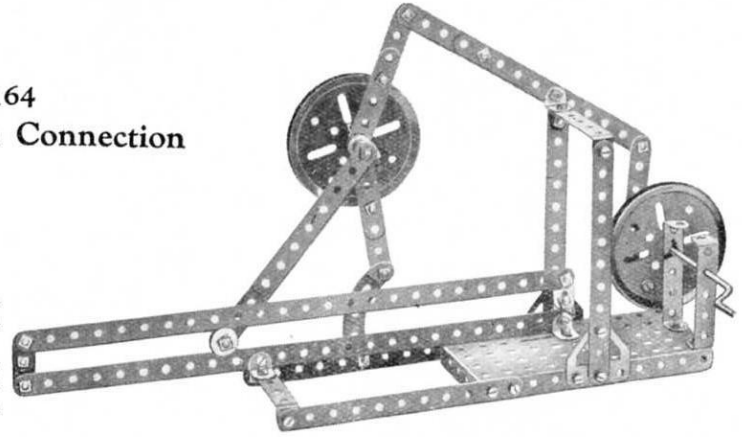


Parts required :

4	of No.	1	1	of No.	22
1	„ „	11	1	„ „	35
2	„ „	12	9	„ „	37
1	„ „	17	3	„ „	37A
			2	of No.	125

The pantograph enables plans, drawings, etc., to be reproduced on a larger or smaller scale than the original. If a pencil, suitably whittled down, is fixed in the reversed angle bracket at the top of the illustration, and the 1½" rod is made to follow the outlines of the drawing, the pencil will draw an accurately enlarged sketch. If the positions of the rod and the pencil be reversed, the latter can be made to trace a reduced sketch of the original drawing.

Model No. 1.164 Double-Action Piston Connection



Parts required :

2	of No.	1	1	of No.	23
6	„ „	2	1	„ „	35
1	„ „	3	36	„ „	37
5	„ „	5	5	„ „	37A
4	„ „	10	4	„ „	48A
2	„ „	11	1	„ „	52
3	„ „	12	1	„ „	90A
2	„ „	19B	3	„ „	111C
1	„ „	19S	2	„ „	126A

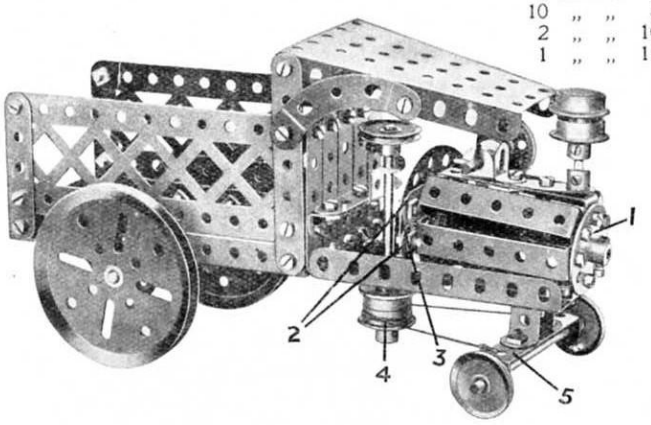
HOW TO CONTINUE

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

Model No. 2.1 Steam Lorry

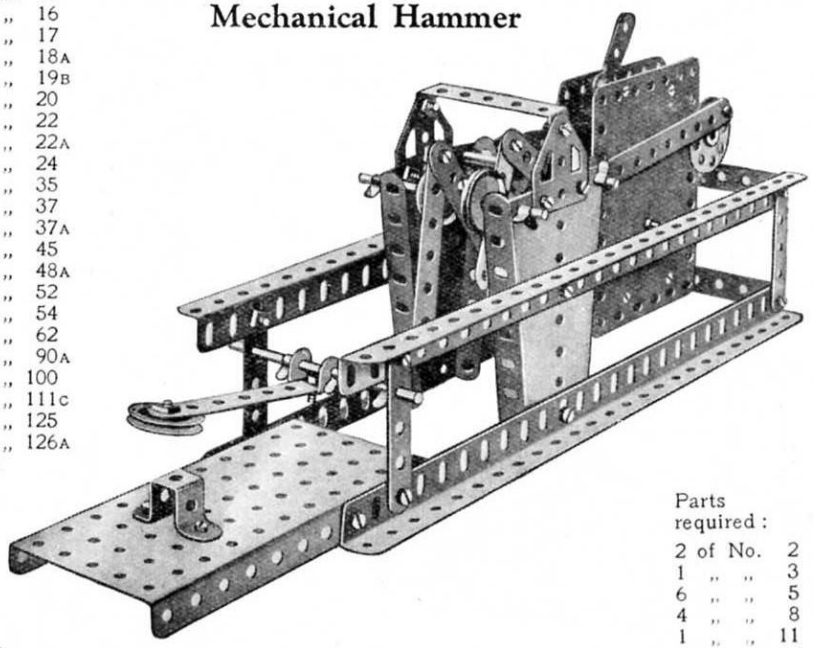
Parts required :

2	of No.	3
10	„ „	5
2	„ „	10
1	„ „	11
3	of No.	12
3	„ „	16
1	„ „	17
1	„ „	18A
2	„ „	19B
4	„ „	20
3	„ „	22
1	„ „	22A
1	„ „	24
5	„ „	35
60	„ „	37
5	„ „	37A
1	„ „	45
8	„ „	48A
1	„ „	52
2	„ „	54
1	„ „	62
3	„ „	90A
2	„ „	100
4	„ „	111C
1	„ „	125
2	„ „	126A



The boiler of the engine is built up of 2½" × ½" double angle strips bolted to the bush wheel 1, and to two 2½" strips 2, which are joined together by flat brackets 3. A 2½" curved strip (small radius) is bolted to he upper strip 2. A cord is passed completely round two ¾" flanged wheels 4 secured to the steering column and its ends are tied to the 2½" × ½" double angle strip 5. The double bent strip bolted to the strip 5 is pivoted by a bolt and two nuts to the sector plate.

Model No. 2.2
Mechanical Hammer



Parts required :

2	of No.	2
1	„ „	3
6	„ „	5
4	„ „	8
1	„ „	11
1	„ „	12
3	„ „	16
4	„ „	22
1	„ „	22A
1	„ „	24
8	„ „	35
32	„ „	37
1	„ „	45
3	„ „	48A
1	„ „	52
2	„ „	54
2	„ „	126A

Clockwork Motor (not included in Outfit)

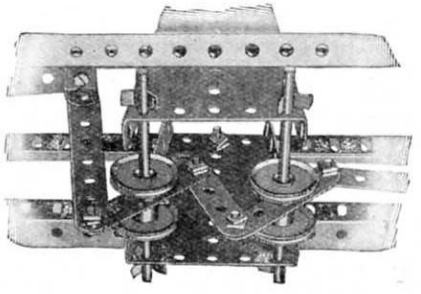
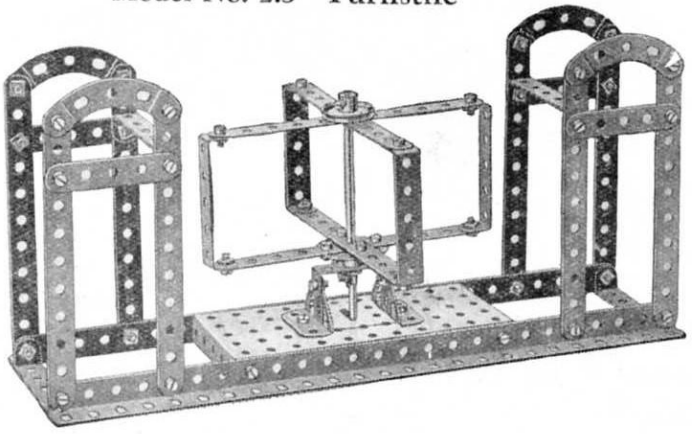


FIG. 2.2A

Model No. 2.3 Turnstile



Parts required :

12	of No.	2
5	„ „	5
1	„ „	15A
1	„ „	22
1	„ „	24
1	„ „	35
44	„ „	37
1	„ „	38
1	„ „	48
8	„ „	48A
1	„ „	52
4	„ „	90A
2	„ „	99
2	„ „	126

Model No. 2.4 Try-Your-Strength Machine

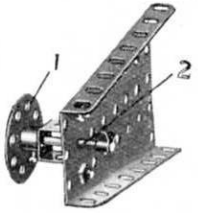


FIG. 2.4A

Parts required :

6	of	No.	1	60	of	No.	37
6	„	„	2	6	„	„	37A
1	„	„	3	4	„	„	38
2	„	„	5	1	„	„	45
2	„	„	6A	1	„	„	48
4	„	„	8	1	„	„	48A
2	„	„	10	1	„	„	52
10	„	„	12	2	„	„	54
2	„	„	18A	3	„	„	90A
1	„	„	23	2	„	„	100
1	„	„	24	2	„	„	126
3	„	„	35				

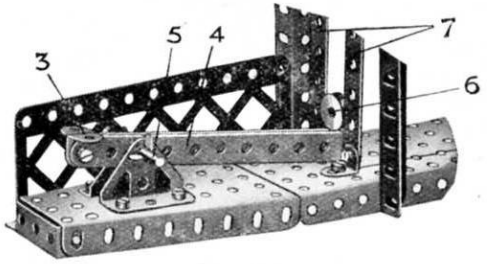
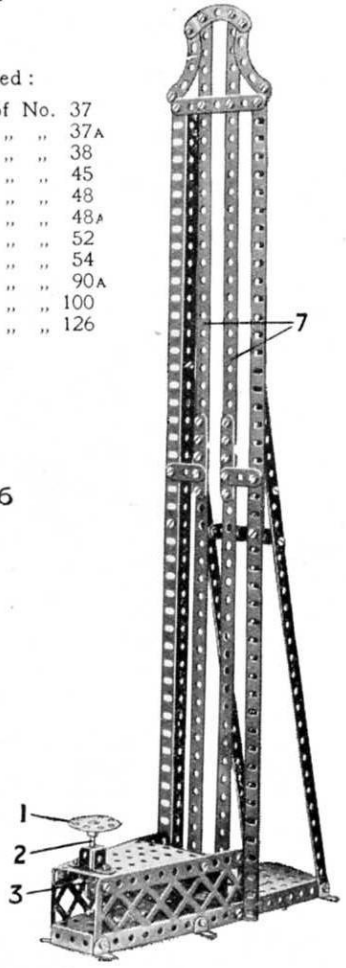


FIG. 2.4B



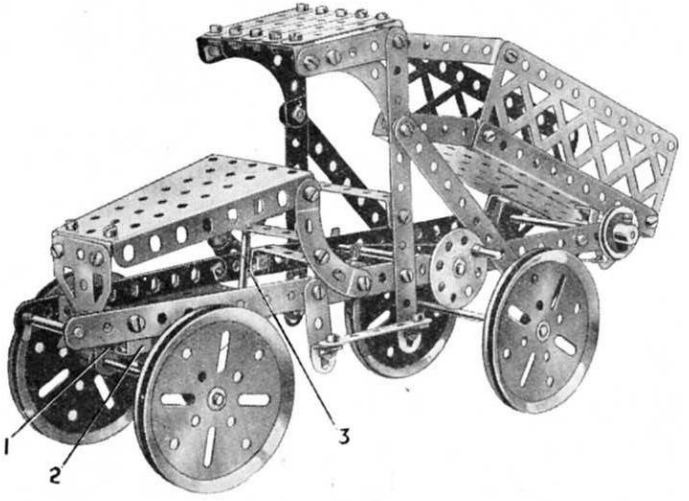
The bush wheel 1 is secured to a short axle rod 2, the lower end of which rests on a pair of angle brackets 3 bolted to the ends of four 5½" strips 4. The strips 4 are pivoted as shown (Fig. 2.4A) on a 1½" rod 5, and on their opposite ends rests a ½" loose pulley wheel 6. When the bush wheel 1 is struck, the 5½" strips fling the pulley wheel 6 upward, but the wheel is guided by the vertical 12½" strips 7. The weight of the strips 4 then causes the bush wheel to resume its original position.

Model No. 2.5 Tipping Motor Wagon

Parts required :

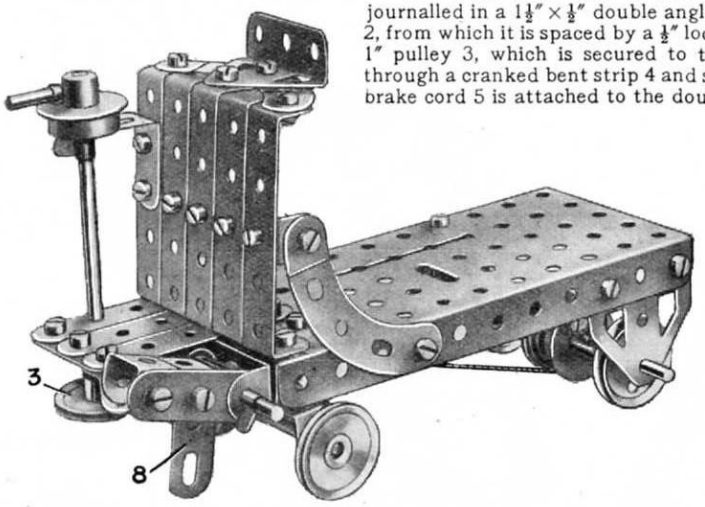
2	of	No.	1	4	of	No.	19B
4	„	„	2	4	„	„	22
11	„	„	5	1	„	„	24
2	„	„	6A	6	„	„	35
6	„	„	12	59	„	„	37
4	„	„	16	4	„	„	37A
1	„	„	17	1	„	„	45
1	„	„	18A	1	„	„	48
				7	„	„	48A

1	of	No.	52
2	„	„	54
4	„	„	90A
2	„	„	100
3	„	„	111C
1	„	„	115
2	„	„	126
1	„	„	126A



The front axle rod is journalled in a 2½" × ½" double angle strip 1 which in turn is bolted to a double bent strip 2. The double bent strip is pivoted to the sector plate by a bolt and two nuts. Cord passing over a 1" pulley wheel attached to the rod 3 is fastened to the ends of the double angle strip 1, and by rotating another pulley, which represents the steering wheel, the road wheels are deflected.

Model No. 2.6 Electric Truck



An underneath view of the truck is shown in Fig. 2.6A. The front axle is journalled in a $1\frac{1}{2}'' \times \frac{1}{2}''$ double angle strip 1 that is free to turn on a double bent strip 2, from which it is spaced by a $\frac{1}{2}''$ loose pulley. A length of cord is wrapped round the 1" pulley 3, which is secured to the end of the steering column, and then passed through a cranked bent strip 4 and secured to the double angle strip 1 as shown. The brake cord 5 is attached to the double bent strip 2, wrapped several times round the $\frac{3}{4}''$ flanged wheels 6, passed through the angle bracket 7, and is finally attached to the crank 8. The operating pedal consists of double brackets bolted to another crank that is secured to the same rod as the crank 8.

Parts required :

3	of	No.	5	1	of	No.	22A	7	of	No.	48A
1	„	„	6A	1	„	„	23	1	„	„	52
2	„	„	11	4	„	„	35	2	„	„	62
1	„	„	12	35	„	„	37	3	„	„	90A
1	„	„	12A	2	„	„	37A	1	„	„	111C
3	„	„	16	5	„	„	38	1	„	„	115
1	„	„	17	1	„	„	44	1	„	„	126
3	„	„	20	1	„	„	45	2	„	„	126A
4	„	„	22	1	„	„	48				

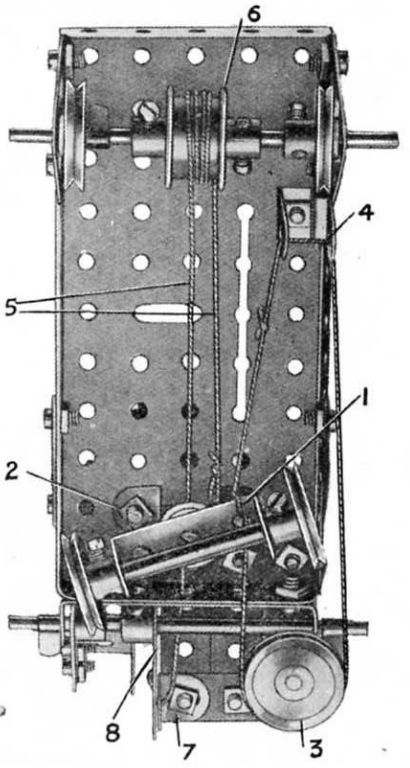
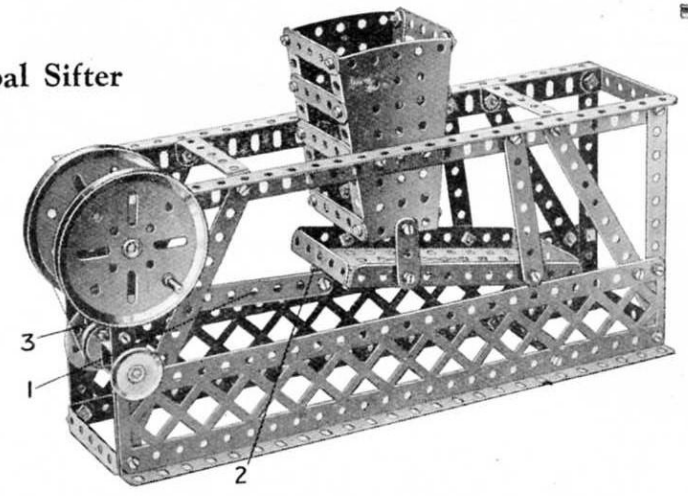


FIG. 2.6A

Model No. 2.7 Coal Sifter

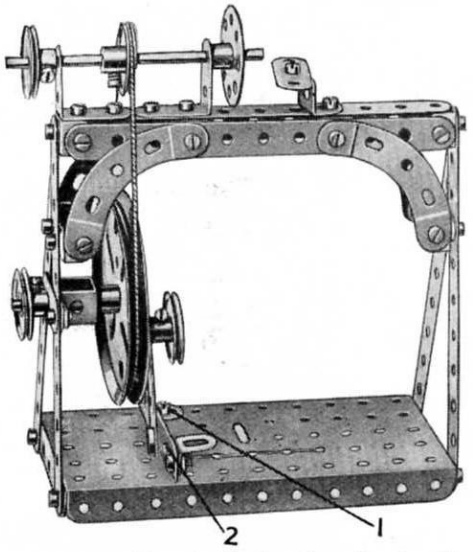


The $5\frac{1}{2}''$ strip 1 is pivoted to the angle bracket 2 by a bolt and two nuts. The angle bracket in turn is bolted to the flanged plate, which is suspended in such a way that it is free to swing to and fro. The other end of the $5\frac{1}{2}''$ strip is pivoted to the bush wheel 3.

Parts required :

9	of	No.	2	2	of	No.	35
2	„	„	3	54	„	„	37
8	„	„	5	6	„	„	37A
2	„	„	6A	8	„	„	38
4	„	„	8	1	„	„	45
1	„	„	12	6	„	„	48A
1	„	„	16	1	„	„	52
1	„	„	17	2	„	„	54
2	„	„	19B	2	„	„	99
2	„	„	22	6	„	„	111C
1	„	„	24	1	„	„	115

Model No. 2.8 Treadle Lathe



Parts required :

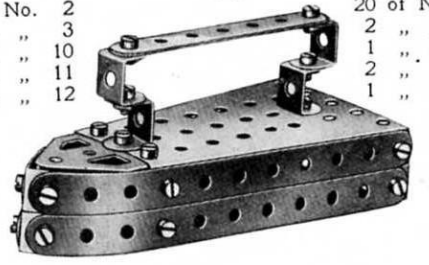
7	of No.	2
1	„ „	3
1	„ „	5
2	„ „	6A
4	„ „	11
6	„ „	12
2	„ „	12A
1	„ „	16
1	„ „	17
3	„ „	19B
4	„ „	22
1	„ „	24
1	„ „	35
34	„ „	37
2	„ „	37A
4	„ „	38
1	„ „	45
1	„ „	52
4	„ „	90A
1	„ „	115
1	„ „	125

The 2½" strip 2, forming the treadle, is attached pivotally by means of a bolt and two nuts to the angle bracket 1. One end of a further 2½" strip is connected by the same means to the 2½" strip 2, and the other end is mounted on a threaded pin secured to the 3" pulley wheel.

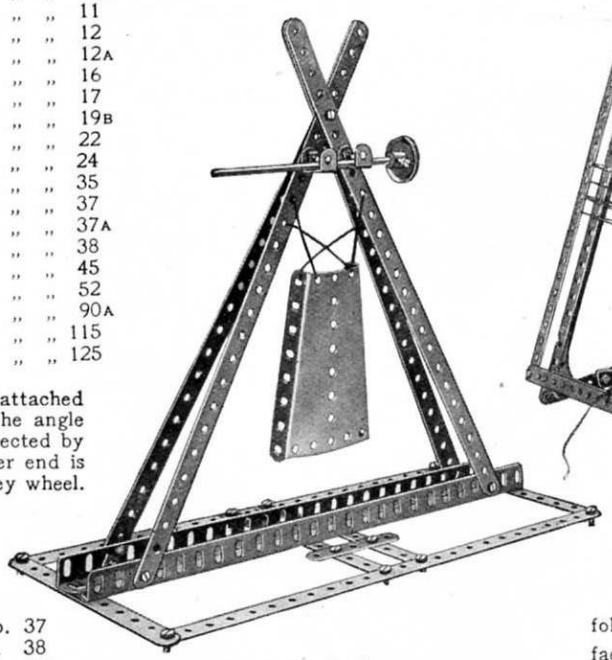
Model No. 2.9 Smoothing Iron

Parts required :

4	of No.	2
2	„ „	3
6	„ „	10
4	„ „	11
2	„ „	12
20	of No.	37
2	„ „	38
1	„ „	48A
2	„ „	54
1	„ „	126A



Model No. 2.10 Gong



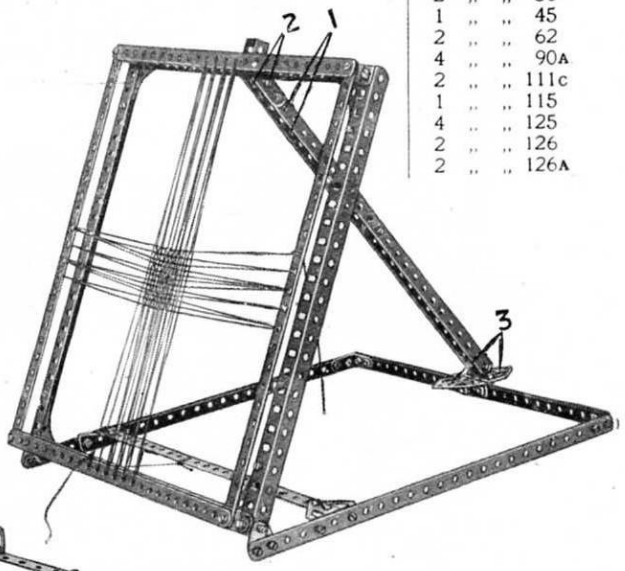
Parts required :

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

Model No. 2.11 Mat Frame

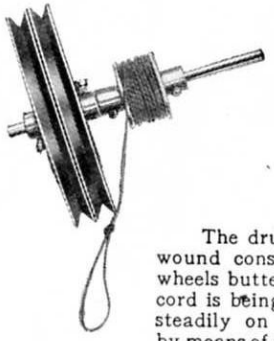
Parts required :

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



The strips 1 are hinged to the frame in the following manner. Two cranks 2 with their bosses facing inward are bolted to the strips 1 and two angle brackets are secured to the frame. A rod is then pushed through the holes in the angle brackets and secured in the bosses of the cranks. A double bracket fastened to the ends of the strips 1 carries a threaded pin, which fits in the holes in the trunnions 3. By removing this pin, the frame may be folded flat.

Model No. 2.12 Spinning Top

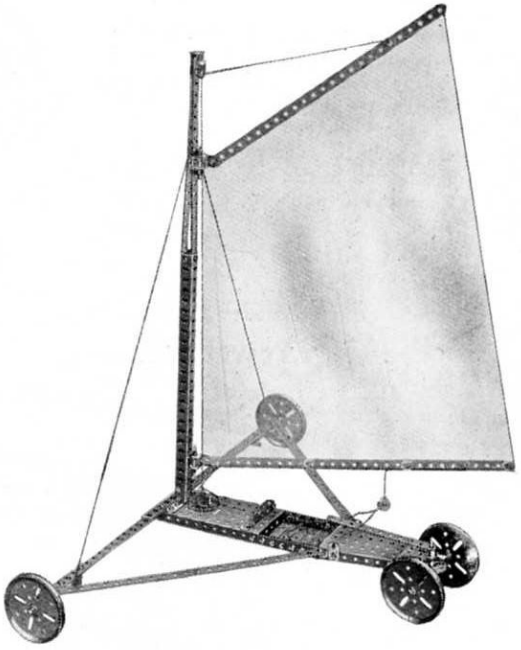


Parts required:

1	of No.	2
1	„ „	16
2	„ „	19B
2	„ „	20
2	„ „	37
1	„ „	40
1	„ „	62

The drum on which the cord is wound consists of two ¾" flanged wheels butted together. While the cord is being pulled, the top is held steadily on some smooth surface by means of the handle shown above. The handle is then lifted off, allowing the top to spin freely.

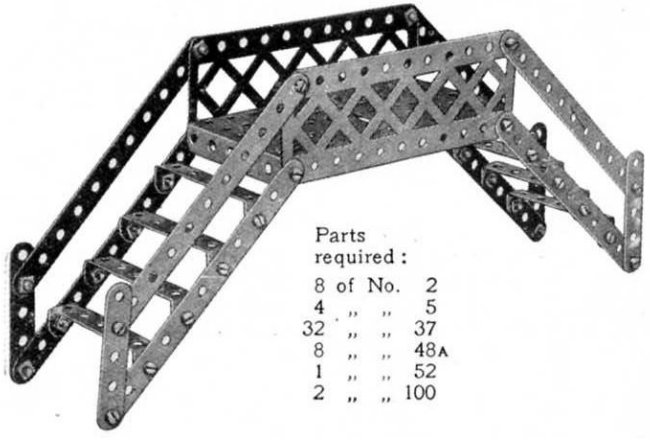
Model No. 2.13 Sand Yacht



Parts required:

8	of No.	1	1	of No.	24
2	„ „	2	12	„ „	35
1	„ „	5	60	„ „	37
4	„ „	8	9	„ „	38
4	„ „	10	8	„ „	48A
4	„ „	11	1	„ „	52
12	„ „	12	1	„ „	54
2	„ „	12A	1	„ „	62
3	„ „	16	1	„ „	90A
1	„ „	17	1	„ „	115
2	„ „	18A	4	„ „	125
4	„ „	19B	1	„ „	126
1		23	2	„ „	126A

Model No. 2.14 High Level Bridge



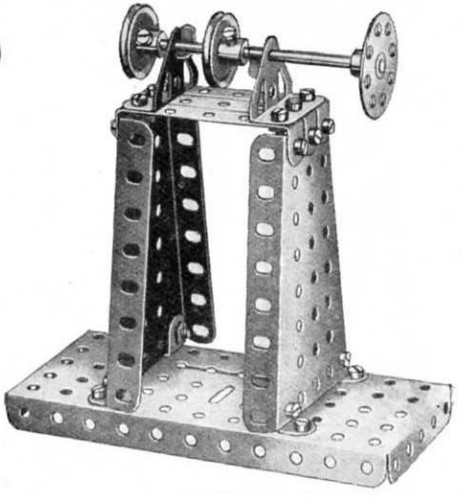
Parts required:

8	of No.	2
4	„ „	5
32	„ „	37
8	„ „	48A
1	„ „	52
2	„ „	100

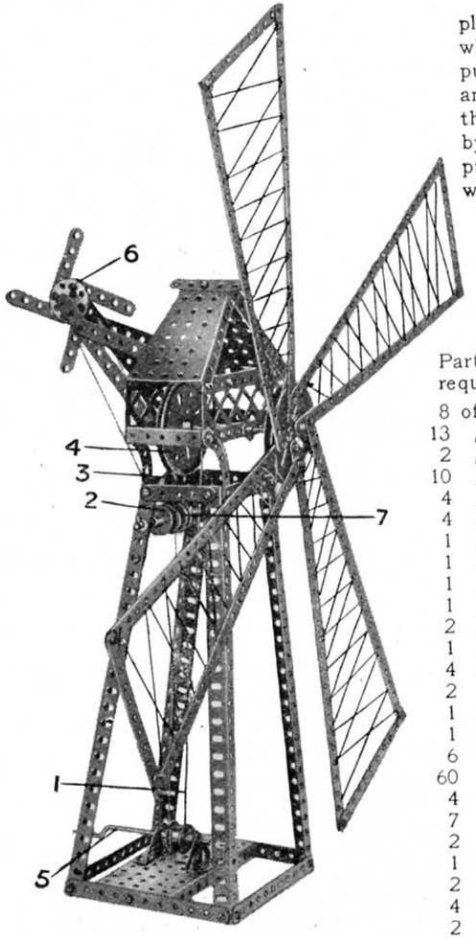
Model No. 2.15 Polishing Spindle

Parts required:

4	of No.	12	20	of No.	37
1	„ „	16	3	„ „	48A
2	„ „	22	1	„ „	52
1	„ „	24	2	„ „	54
2	„ „	35	2	„ „	126



Model No. 2.16 Windmill

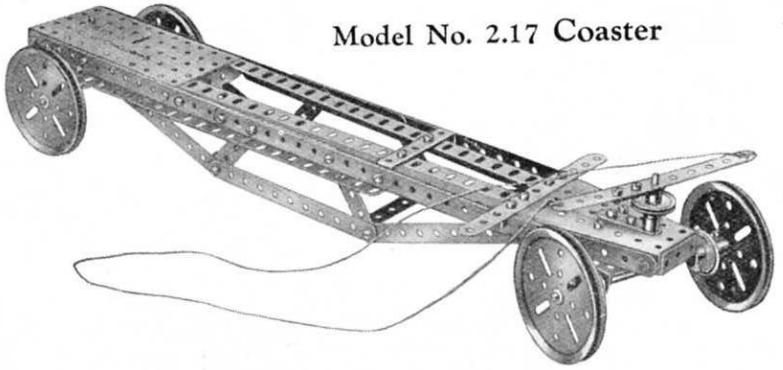


The operating cord 1 is given a complete turn round the pair of ¾" flanged wheels 2. It is then led round the 1" loose pulley 3, over the 3" pulley 4, then down and round the ¾" flanged wheels secured to the crank handle 5. The vane 6 is rotated by a cord which passes round a 1" fixed pulley 7 secured to the shaft of the flanged wheels 2.

Parts required :

8	of No.	1
13	„ „	2
2	„ „	3
10	„ „	5
4	„ „	8
4	„ „	12
1	„ „	15
1	„ „	15A
1	„ „	16
1	„ „	18A
2	„ „	19B
1	„ „	19S
4	„ „	20
2	„ „	22
1	„ „	22A
1	„ „	24
6	„ „	35
60	„ „	37
4	„ „	37A
7	„ „	38
2	„ „	48A
1	„ „	52
2	„ „	54
4	„ „	90A
2	„ „	100
4	„ „	111C
2	„ „	126

Model No. 2.17 Coaster

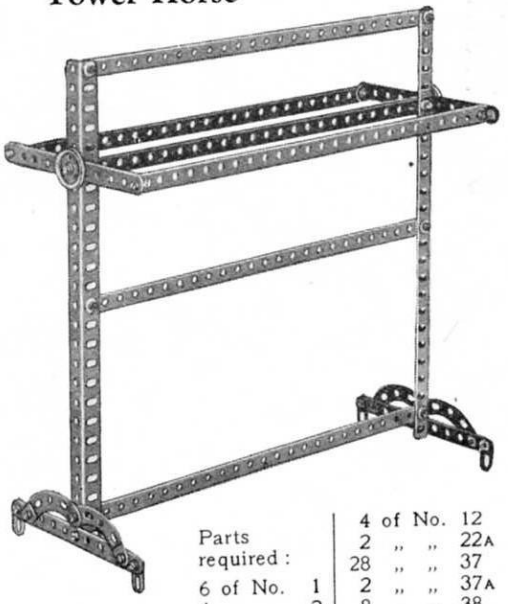


Parts required :

2	of No.	1	1	of No.	23
8	„ „	2	1	„ „	24
4	„ „	5	44	„ „	37
4	„ „	8	4	„ „	38
1	„ „	15	1	„ „	48
1	„ „	15A	4	„ „	48A
1	„ „	17	1	„ „	52
4	„ „	19B	1	„ „	54
3	„ „	22	2	„ „	62

2 of No. 126

Model No. 2.18 Towel Horse



Parts required :

6	of No.	1	4	of No.	12
4	„ „	2	2	„ „	22A
2	„ „	8	28	„ „	37
4	„ „	10	2	„ „	37A
			8	„ „	38
			4	„ „	90A
			2	„ „	111C

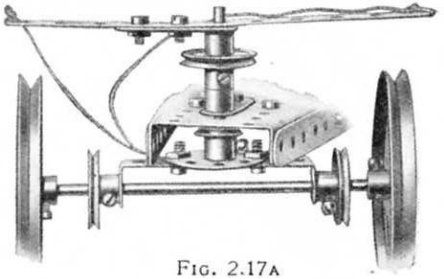
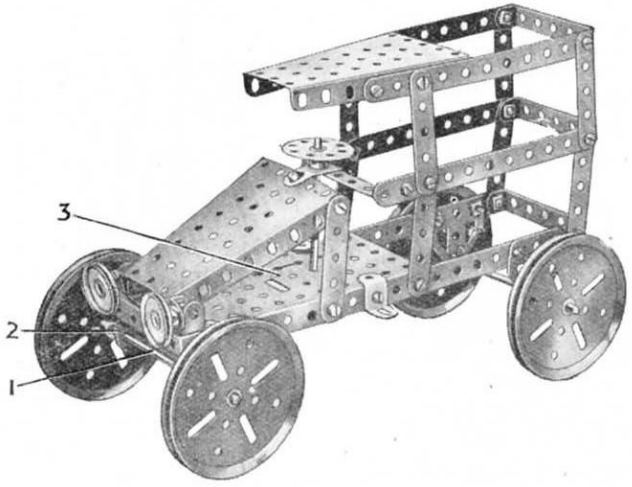


FIG. 2.17A

Model No. 2.19 Motor Van

Parts required :

6	of No.	2	1	of No.	24	6	of No. 48A
10	„ „	5	5	„ „	35	1	„ „ 52
1	„ „	10	35	„ „	37	2	„ „ 54
2	„ „	12	2	„ „	37A	3	„ „ 111C
1	„ „	15	1	„ „	38	2	„ „ 125
1	„ „	15A	1	„ „	45	2	„ „ 126A
1	„ „	16	1	„ „	48		
4	„ „	19B					
3	„ „	22					



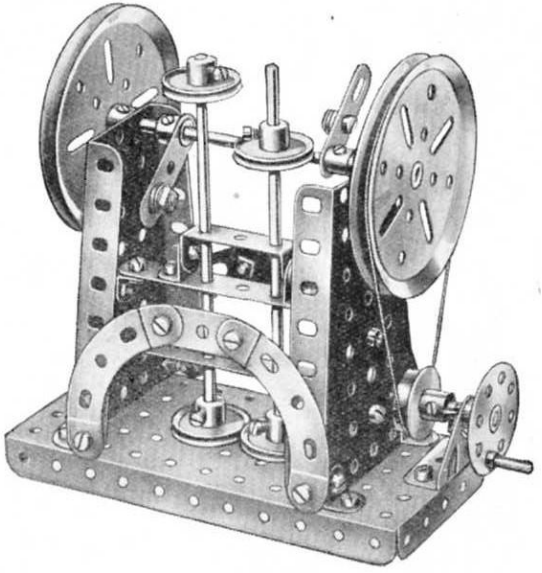
The axle rod 1 is journalled in a $2\frac{1}{2}'' \times \frac{1}{2}''$ double angle strip 2. The latter is bolted to a double bent strip that is pivoted to the flanged plate 3 by a bolt and two nuts. Steering is effected by a cord attached to the ends of the double angle strip 2 and passed round a 1" pulley wheel fastened to the lower end of the steering rod.

Model No. 2.20 Easel

Parts required :

5	of No.	1	
3	„ „	2	
2	„ „	3	
3	„ „	5	
4	„ „	12	
2	„ „	12A	
1	„ „	15A	
2	„ „	22	
19	„ „	37	
4	„ „	38	

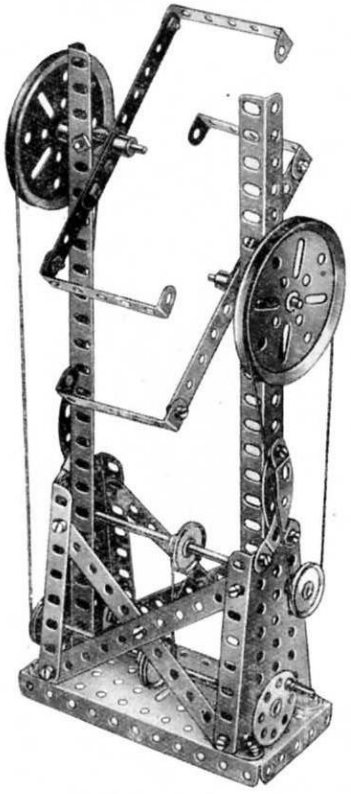
Model No. 2.21 Stamping Mill



Parts required :

2	of No.	3	30	of No.	37		
2	„ „	6A	2	„ „	37A		
10	„ „	12	11	„ „	38		
2	„ „	15	1	„ „	48		
1	„ „	15A	1	„ „	52		
1	„ „	17	2	„ „	54		
2	„ „	19B	2	„ „	62		
1	„ „	20	4	„ „	90A		
4	„ „	22	2	„ „	111C		
1	„ „	24	1	„ „	115		
1	„ „	35	1	„ „	126		

Model No. 2.22 Candy Puller

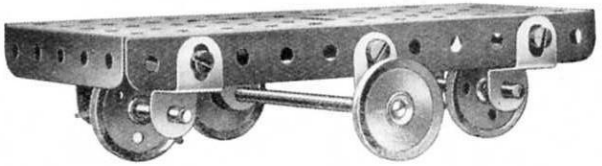


Parts required:

6	of	No.	2	3	of	No.	35
2	,,	,,	8	36	,,	,,	37
6	,,	,,	12	4	,,	,,	38
2	,,	,,	15	4	,,	,,	48A
2	,,	,,	17	1	,,	,,	52
2	,,	,,	19B	2	,,	,,	54
4	,,	,,	22	2	,,	,,	62
1	,,	,,	24	4	,,	,,	90A

1 of No. 115

Model No. 2.23 Revolving Truck



Parts required:

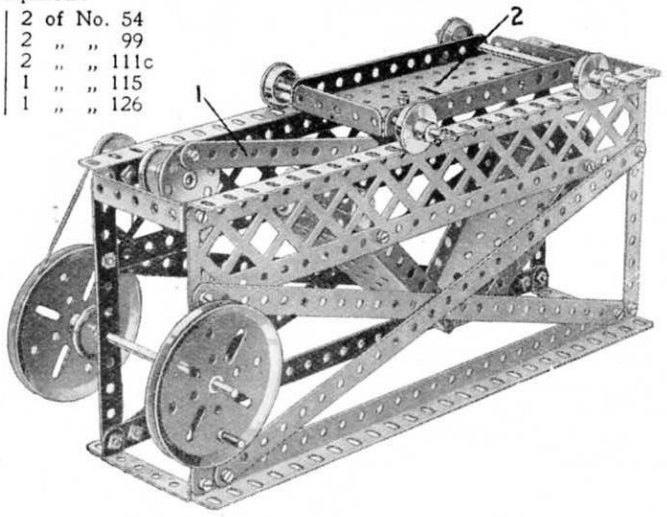
1	of	No.	16
2	,,	,,	17
2	,,	,,	22
2	,,	,,	22A
4	,,	,,	35
6	,,	,,	37
1	,,	,,	52
4	,,	,,	125

Model No. 2.24 Sifter

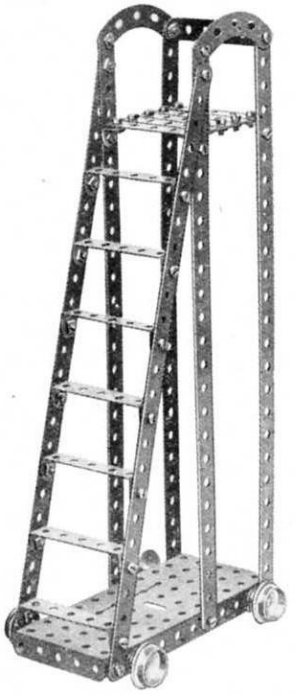
The 5½" strip 1 is pivoted by a bolt and two nuts (S.M.262) to the bush wheel and also to a trunnion bolted to the undersurface of the flanged plate 2. The rod carrying the bush wheel is journalled in one of the side girders and through a double bent strip.

Parts required:

4	of	No.	1	2	of	No.	54
5	,,	,,	2	2	,,	,,	99
4	,,	,,	5	2	,,	,,	111C
2	,,	,,	6A	1	,,	,,	115
4	,,	,,	8	1	,,	,,	126
4	,,	,,	10				
2	,,	,,	15				
1	,,	,,	15A				
1	,,	,,	17				
2	,,	,,	19B				
4	,,	,,	20				
3	,,	,,	22				
1	,,	,,	24				
4	,,	,,	35				
36	,,	,,	37				
4	,,	,,	37A				
1	,,	,,	38				
1	,,	,,	44				
4	,,	,,	48A				
1	,,	,,	52				



Model No. 2.25 Ladder on Wheels



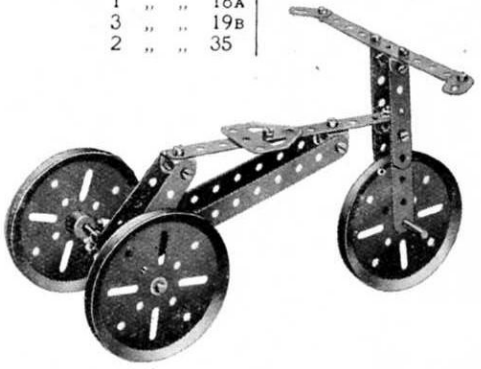
Parts required:

6	of	No.	1
7	,,	,,	5
4	,,	,,	12
2	,,	,,	16
4	,,	,,	20
40	,,	,,	37
4	,,	,,	38
8	,,	,,	48A
1	,,	,,	52
2	,,	,,	90A

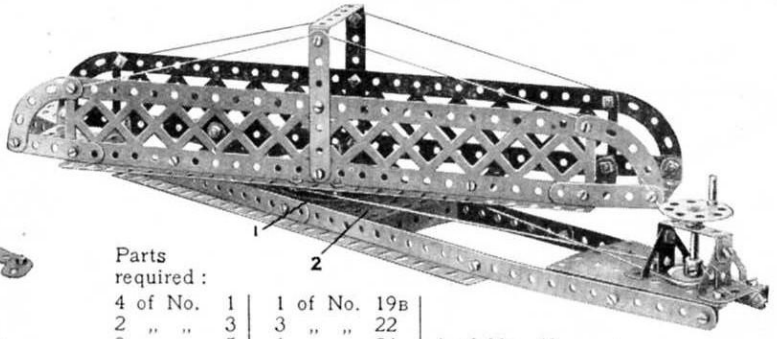
Model No. 2.26 Tricycle

Parts required :

4	of No.	2	15	of No.	37
6	„ „	5	2	„ „	37A
2	„ „	10	1	„ „	111c
3	„ „	11	1	„ „	126A
2	„ „	12			
1	„ „	16			
1	„ „	18A			
3	„ „	19B			
2	„ „	35			



Model No. 2.27 Turntable



Parts required :

4	of No.	1	1	of No.	19B			
2	„ „	3	3	„ „	22			
8	„ „	5	1	„ „	24	1	of No.	48
4	„ „	8	45	„ „	37	7	„ „	48A
1	„ „	17	4	„ „	37A	1	„ „	52
1	„ „	18A	4	„ „	38	2	„ „	54

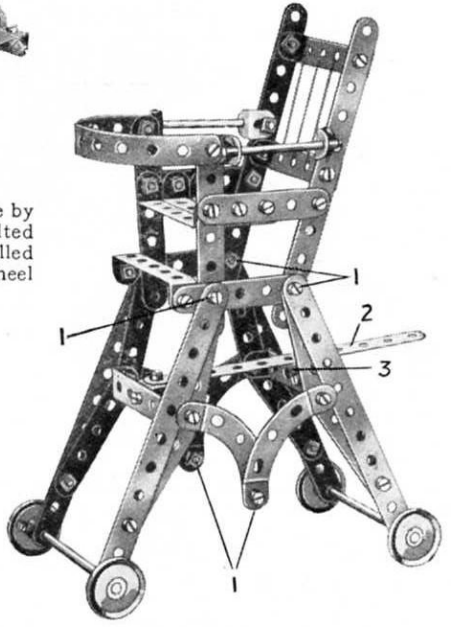
4	of No.	90A	
2	„ „	99	
4	„ „	111c	

The two sides of the revolving portion are joined in the middle by two pairs of 2½" strips, each pair being overlapped three holes and bolted to the 3" pulley wheel 1. An axle rod secured in the latter is journalled in the bottom plate 2 and retained in position by a 1" fast pulley wheel beneath the plate.

Model No. 2.28 Baby Chair

Parts required :

8	of No.	2	4	of No.	35
2	„ „	3	35	„ „	37
12	„ „	5	2	„ „	37A
6	„ „	12	4	„ „	38
2	„ „	16	8	„ „	48A
2	„ „	17	4	„ „	90A
4	„ „	22	1	„ „	115

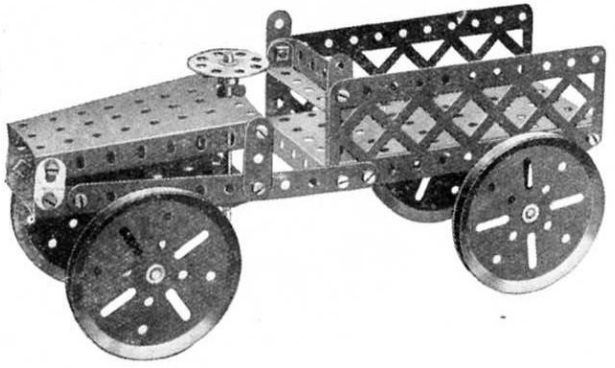


The bolts 1 are all secured pivotally (see S.M. Nos. 262 and 263), and the height of the chair may be adjusted by fitting any hole in the strip 2 over the shank of a bolt that is secured in an angle bracket bolted to the double angle strip 3.

Model No. 2.29 Motor Truck

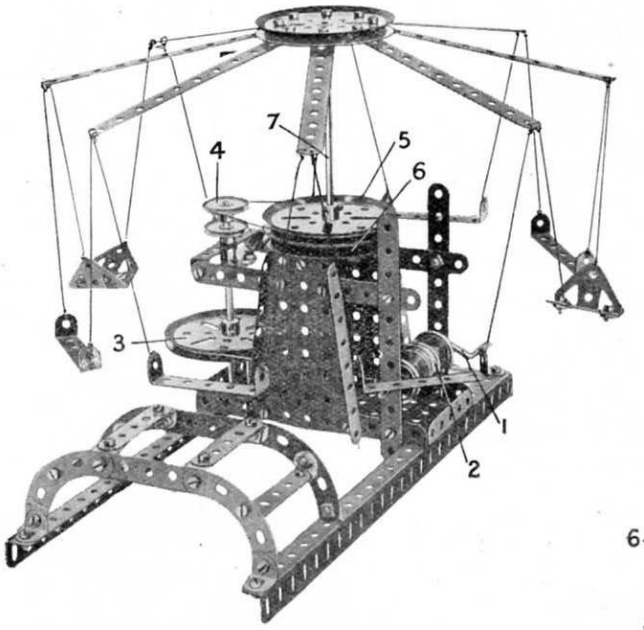
Parts required :

2	of No.	2	1	of No.	22	2	of No.	54
2	„ „	5	1	„ „	24	2	„ „	100
2	„ „	6A	1	„ „	35	1	„ „	111c
2	„ „	10	23	„ „	37	2	„ „	126A
1	„ „	11	2	„ „	37A			
3	„ „	16	3	„ „	48A			
4	„ „	19B	1	„ „	52			



A cord passed twice round a 1" fast pulley wheel on the lower end of the steering column is tied to the ends of a 2½" × ½" double angle strip, which is pivoted by means of a bolt and lock-nuts to a double bracket bolted to the lower sector plate. The front axle is journalled in the end holes of the double angle strip.

Model No. 2.30 Roundabout



When the crank handle is turned, the drum 2 (formed by butting together two ¾" flanged wheels) turns the 3" pulley wheel 3 by means of an endless cord. The 1" fast pulley wheel 4 similarly turns a second 3" pulley wheel 5 resting on another 3" pulley wheel 6 (see Fig. 2.30A). The end of the axle rod 7 is quite free to revolve in the boss of the lower 3" pulley wheel 6.

Parts required :

13	of No.	2
6	„ „	5
2	„ „	8
12	„ „	12
2	„ „	12A
2	„ „	15
1	„ „	19
4	„ „	19B
2	„ „	20
4	„ „	22
1	„ „	24
48	„ „	37
7	„ „	48A
1	„ „	52
2	„ „	54
4	„ „	90A
2	„ „	126
2	„ „	126A

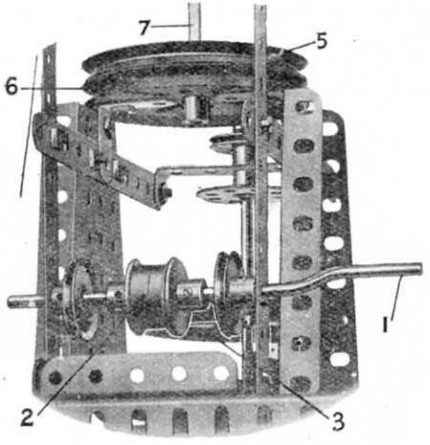
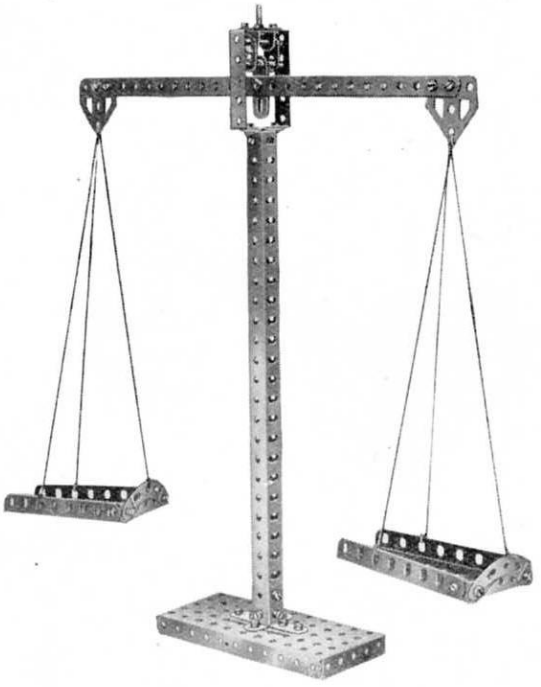


FIG. 2.30A

Model No. 2.31 Scales



Parts required :

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

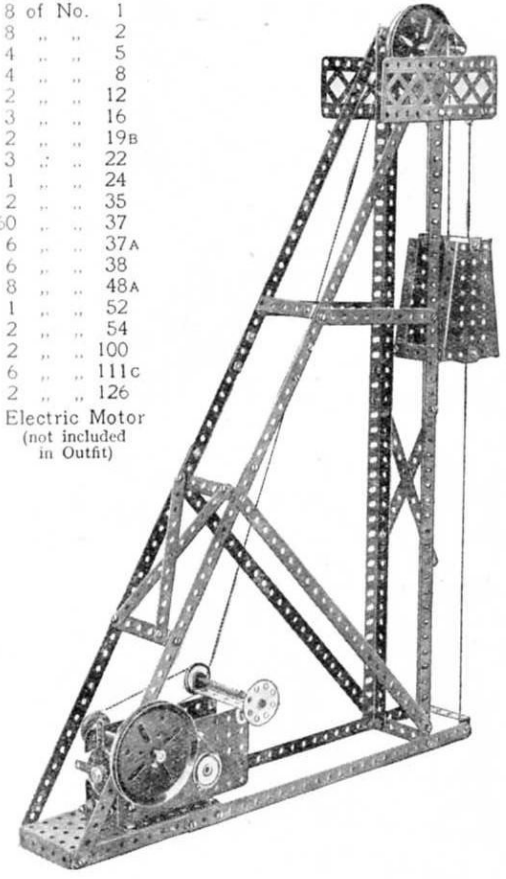
Model No. 2.32 Pit Head Gear

(Electrically Operated)

Parts required :

8	of	No.	1
8	„	„	2
4	„	„	5
4	„	„	8
2	„	„	12
3	„	„	16
2	„	„	19B
3	„	„	22
1	„	„	24
2	„	„	35
60	„	„	37
6	„	„	37A
6	„	„	38
8	„	„	48A
1	„	„	52
2	„	„	54
2	„	„	100
6	„	„	111C
2	„	„	126

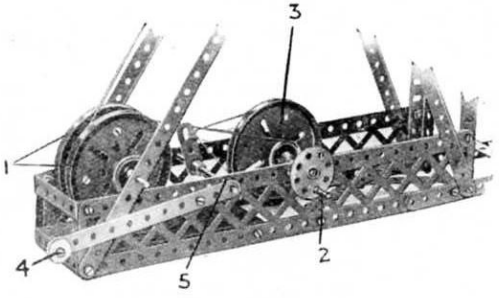
Electric Motor (not included in Outfit)



Model No. 2.33 Pit Head Gear

(Hand Operated)

This is an alternative construction of the base of Model No. 2.32, and shows how the electric motor may be dispensed with if necessary. Two 3″ pulley wheels 1 are bolted together by four double brackets to form a drum on which the hoisting cord is wound. The cage is raised or lowered on operation of the handle 2, which is connected to the winding drum by an ordinary belt drive. The cage is prevented from overhauling by a band brake that acts on the groove of a third 3″ pulley wheel 3. The brake normally is applied by the weight of the ½″ loose pulley wheel 4, which is secured to the end of a 5½″ strip that is bolted to the crank 5.



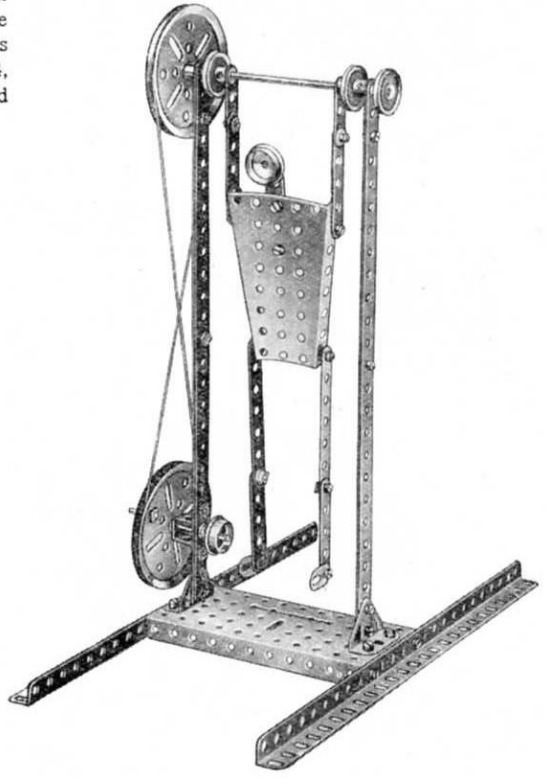
Parts required :

6	of	No.	1	4	of	No.	22	2	of	No.	54
7	„	„	2	1	„	„	23	2	„	„	62
3	„	„	5	1	„	„	24	2	„	„	99
4	„	„	8	3	„	„	35	2	„	„	100
4	„	„	11	60	„	„	37	6	„	„	111C
6	„	„	12	6	„	„	37A	1	„	„	115
4	„	„	16	8	„	„	48A	2	„	„	126A
4	„	„	19B	1	„	„	52				

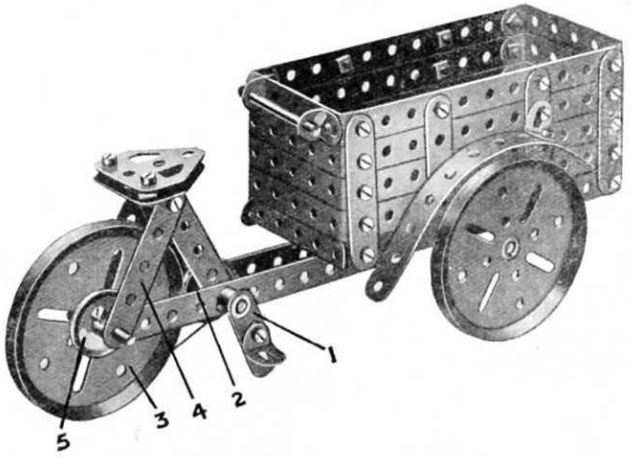
Model No. 2.34 Acrobat

Parts required :

4	of	No.	1	28	of	No.	37
2	„	„	3	6	„	„	37A
5	„	„	5	5	„	„	38
2	„	„	8	1	„	„	45
2	„	„	10	1	„	„	52
1	„	„	15	1	„	„	54
2	„	„	19B	2	„	„	62
2	„	„	20B	1	„	„	115
3	„	„	22	2	„	„	126



Model No. 2.35 Carrier Tricycle



Each pedal of the tricycle consists of an angle bracket pivotally attached to a crank 1 by means of a bolt and two nuts (see S.M. No. 262). The cranks are secured to a 1½" axle rod carrying a 1" fast pulley wheel 2. A cord passes round this pulley and around the 3" pulley wheel 3, which is spaced away from the 2½" strips 4 by a 1" fast pulley wheel 5. The double bracket 6 (Fig. 2.35A) is attached pivotally to the lower framework by a bolt and lock-nuts (S.M. 263).

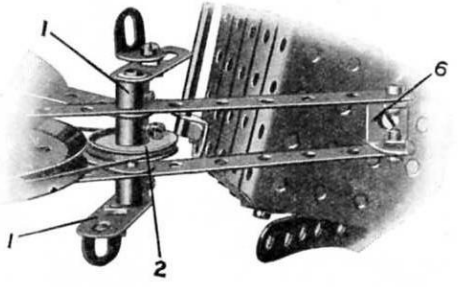
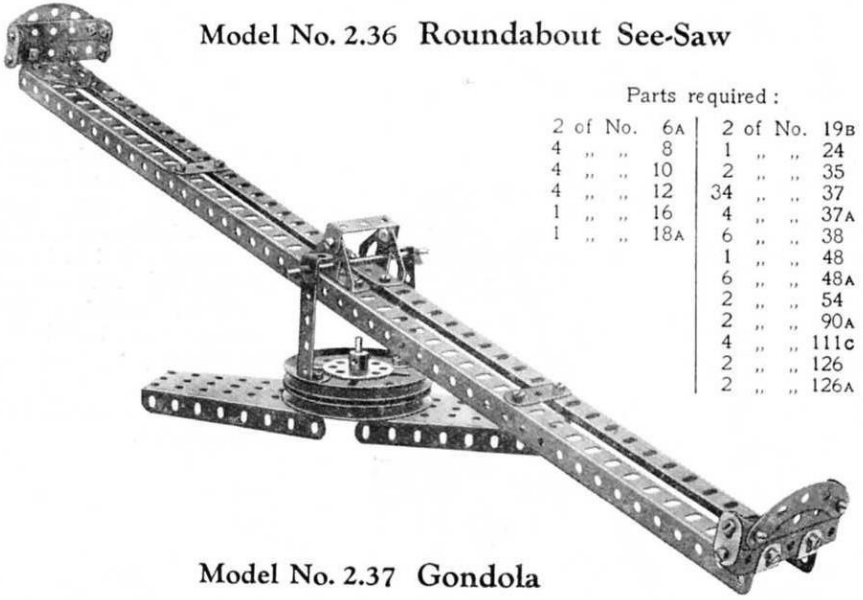


FIG. 2.35A

Parts required :

12	of No.	2
12	„ „	5
2	„ „	11
6	„ „	12
1	„ „	16
1	„ „	17
2	„ „	18A
3	„ „	19B
2	„ „	22
45	„ „	37
5	„ „	37A
8	„ „	48A
1	„ „	52
2	„ „	62
3	„ „	111C
2	„ „	126A

Model No. 2.36 Roundabout See-Saw



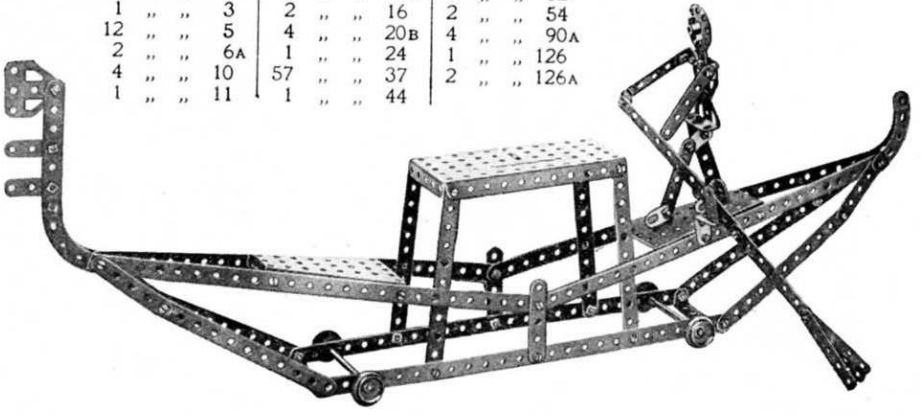
Parts required :

2	of No.	6A	2	of No.	19B
4	„ „	8	1	„ „	24
4	„ „	10	2	„ „	35
4	„ „	12	34	„ „	37
1	„ „	16	4	„ „	37A
1	„ „	18A	6	„ „	38
			1	„ „	48
			6	„ „	48A
			2	„ „	54
			2	„ „	90A
			4	„ „	111C
			2	„ „	126
			2	„ „	126A

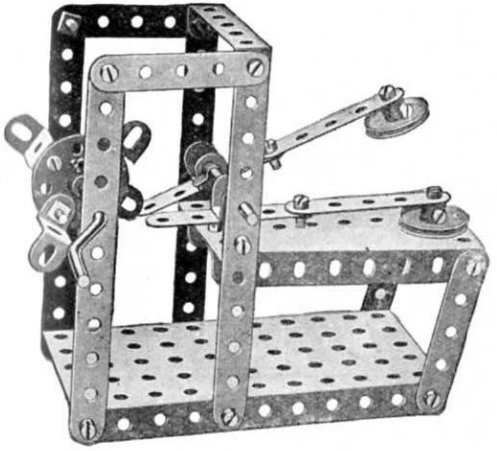
Model No. 2.37 Gondola

Parts required :

6	of No.	1	5	of No.	12	2	of No.	48A
10	„ „	2	1	„ „	12A	1	„ „	52
1	„ „	3	2	„ „	16	2	„ „	54
12	„ „	5	4	„ „	20B	4	„ „	90A
2	„ „	6A	1	„ „	24	1	„ „	126
4	„ „	10	57	„ „	37	2	„ „	126A
1	„ „	11	1	„ „	44			



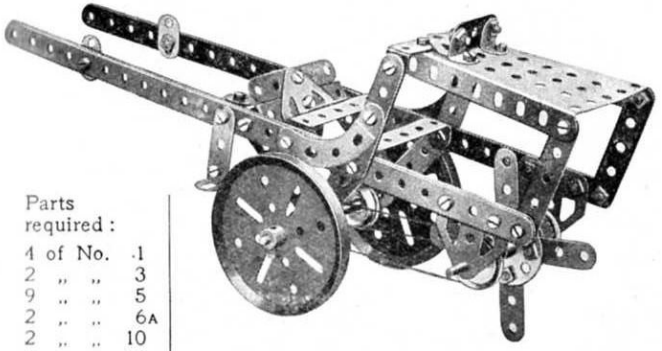
Model No. 2.38 Double Drop Hammer



Parts required :

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

Model No. 2.40 Hay Tedder



Parts required :

4	of	No.	1
2	,,	,,	3
9	,,	,,	5
2	,,	,,	6A
2	,,	,,	10
6	,,	,,	12
1	,,	,,	15A
1	,,	,,	16
2	,,	,,	19
2	,,	,,	20B
2	of	No.	22
1	,,	,,	24
2	,,	,,	35
34	,,	,,	37
6	of	No.	37A
4	,,	,,	38
4	,,	,,	48A
1	,,	,,	54
3	of	No.	90A
6	,,	,,	111C
2	,,	,,	126
2	,,	,,	126A

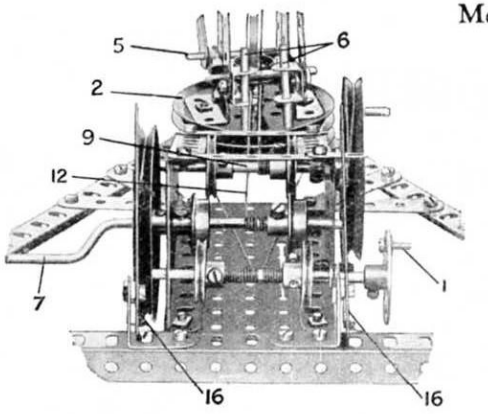
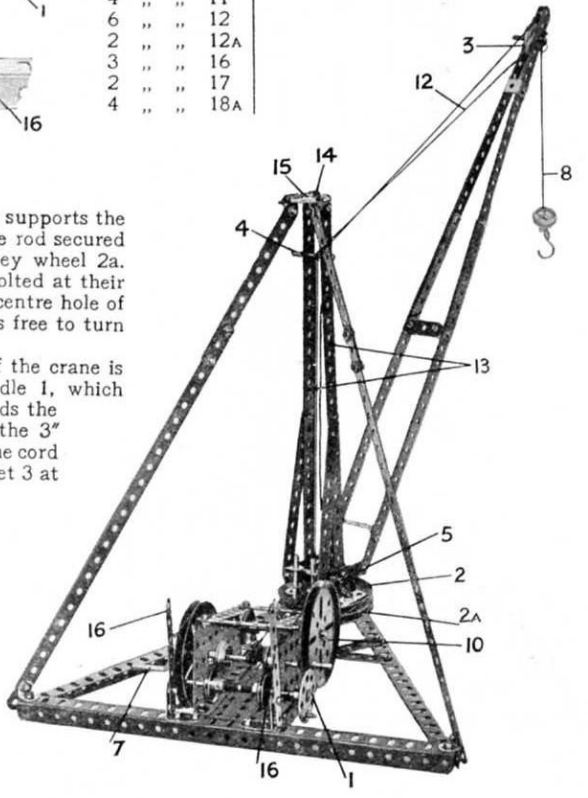


FIG. 2.39A

Model No. 2.39 Derrick

Parts required :

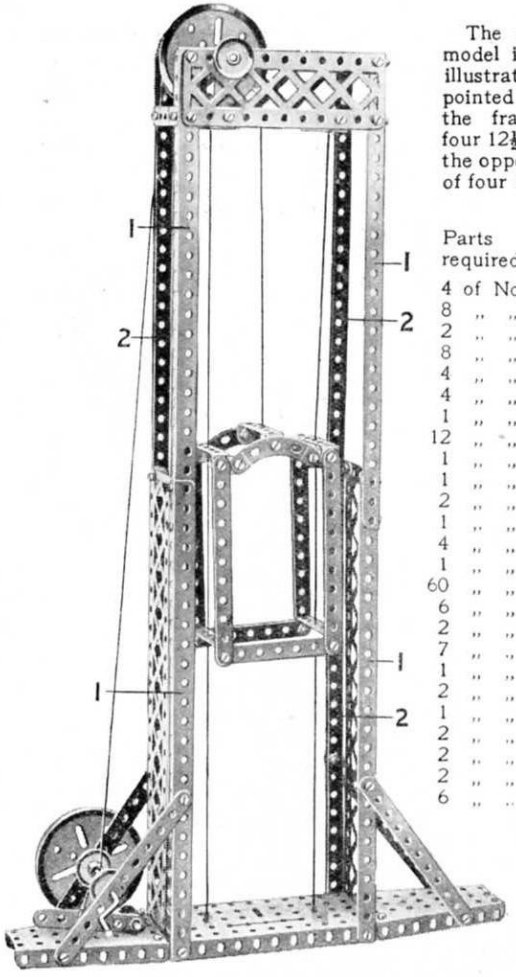
8	of	No.	1
4	,,	,,	2
2	,,	,,	3
8	,,	,,	5
1	,,	,,	6A
3	,,	,,	8
2	,,	,,	10
4	,,	,,	11
6	,,	,,	12
2	,,	,,	12A
3	,,	,,	16
2	,,	,,	17
4	,,	,,	18A
4	of	No.	19B
4	,,	,,	20
4	,,	,,	22
1	,,	,,	23
1	,,	,,	24
11	,,	,,	35
58	,,	,,	37
3	,,	,,	37A
5	,,	,,	38
1	of	No.	52
2	,,	,,	54
1	,,	,,	57
1	,,	,,	111C
1	,,	,,	115
2	,,	,,	126



The 3" pulley wheel 2, which supports the jib, is free to turn on a short axle rod secured in the boss of the lower 3" pulley wheel 2a. The vertical 12½" strips 13 are bolted at their tops to a double bracket, to the centre hole of which is secured a bolt 14 that is free to turn in the flat trunnion 15.

The swivelling movement of the crane is carried out by turning the handle 1, which simultaneously winds and unwinds the ends of a cord passing round the 3" pulley wheel 2 (see Fig. 2.39A). The cord 12, which is tied to the flat bracket 3 at the head of the jib passes over the 2" rod 4, under a similar rod 5, and between two vertical 2" rods 6, which act as guides, and is finally wound on to the crank handle 7. Hence on operation of the latter the jib is raised or lowered. The cord 8 also passes round the rods 4, 5 and 6, and is wound on to the rod 9. Operation of the handle 10 raises and lowers the hook 11. The cords 8 and 12 are prevented from unwinding by band-and-pulley brakes 16.

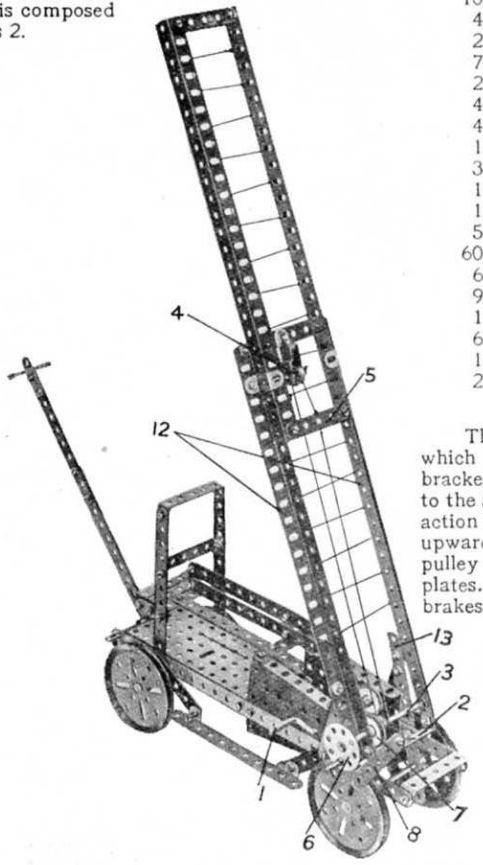
Model No. 2.41 Elevator



The construction of this model is fairly clear in the illustration, but it might be pointed out that one side of the framework consists of four 12½" angle girders 1 while the opposite side is composed of four 12½" strips 2.

Parts required :

4	of No.	1
8	,, ,,	2
2	,, ,,	3
8	,, ,,	5
4	,, ,,	8
4	,, ,,	10
1	,, ,,	11
12	,, ,,	12
1	,, ,,	16
1	,, ,,	18A
2	,, ,,	19B
1	,, ,,	19S
4	,, ,,	22
1	,, ,,	35
60	,, ,,	37
6	,, ,,	37A
2	,, ,,	38
7	,, ,,	48A
1	,, ,,	52
2	,, ,,	54
1	,, ,,	62
2	,, ,,	90A
2	,, ,,	99
2	,, ,,	100
6	,, ,,	111C



Model No. 2.42 Fire Escape

Parts required :

2	of No.	1
12	,, ,,	2
1	,, ,,	3
10	,, ,,	5
4	,, ,,	8
2	,, ,,	10
7	,, ,,	12
2	,, ,,	12A
4	,, ,,	16
4	,, ,,	19B
1	,, ,,	19S
3	,, ,,	22
1	,, ,,	23
1	,, ,,	24
5	,, ,,	35
60	,, ,,	37
6	,, ,,	37A
9	,, ,,	38
1	,, ,,	44
6	,, ,,	111C
1	,, ,,	115
2	,, ,,	125

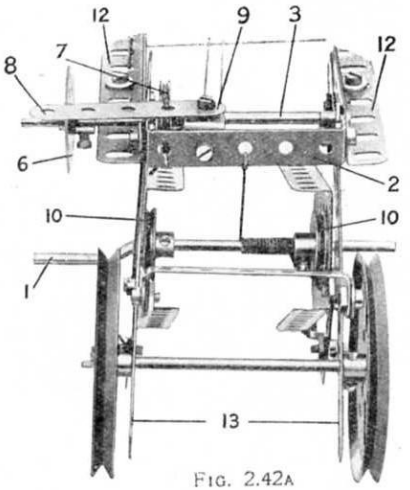


FIG. 2.42A

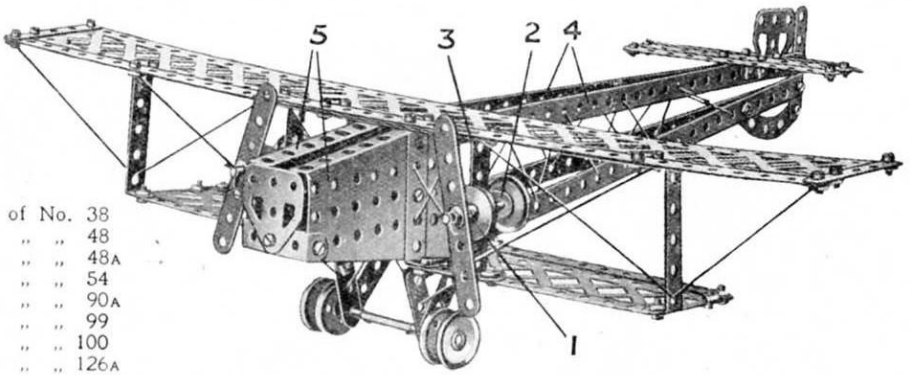
The ladder is elevated on operation of the crank handle 1, which winds in a cord tied to the double angle strip 2. Angle brackets bolted to the 12½" angle girders 12 are attached pivotally to the 5½" strips 13 by means of bolts and nuts (S.M. 262), and the action of winding in the cord thus causes the ladder to swing upward. It is prevented from falling by the friction of the 1" pulley wheels 10 (Fig. 2.42A), which press against the two sector plates. When the ladder is fully elevated, its lower ends act as brakes to prevent the road wheels from revolving.

A second cord is wound upon the rod 3. One end is then carried over the ½" loose pulley wheel 4 and tied to the 2½" strip 5, the opposite end being carried directly to the same strip and secured to it. When the handle 6 is turned, the two ends of the cord are wound and unwound simultaneously, and the ladder is extended or shortened as required. A permanent brake is provided by a cord passing over the 1" pulley wheel 7 and having both its ends secured to the 2½" strip 8. The strip 8 is bolted firmly to the angle bracket 9 (Fig. 2.42A) and keeps the brake continuously in action.

Model No. 2.43 Aeroplane

Parts required :

7	of No.	1
2	„ „	2
2	„ „	3
7	„ „	5
2	„ „	6A
8	„ „	10
2	„ „	11
8	„ „	12
1	„ „	16
2	„ „	17
2	„ „	20
4	„ „	22
2	„ „	22A
8	„ „	35
58	„ „	37
6	of No.	38
1	„ „	48
6	„ „	48A
2	„ „	54
1	„ „	90A
2	„ „	99
2	„ „	100
2	„ „	126A



Each engine is represented by a ¾" flanged wheel 1 and a 1" fast pulley wheel secured to a 2" rod journalled in a double bracket 2, which is bolted to the 2½" × ½" vertical double angle strip 3. The 12½" strips 4 of the fuselage proper are bolted to the two sector plates 5, and also by means of angle brackets to the wings. The tail plane consists of two 5½" strips to which a similar strip, representing the movable portion of the plane, is attached by means of flat brackets.

Model No. 2.44 Anti-Aircraft Gun

The general construction of the model will be made clear by reference to Figures 2.44A and 2.44B. Rotation of the handle 1 causes the gun to revolve on the 3" pulley wheel 2. The barrel of the gun is so balanced on the axle rod 3 that it tends to fall by its own weight, but is prevented from doing so by a cord 4 tied to the gun close to the breech and wound on the 3½" rod 5. By turning the pulley wheels 6 the muzzle is raised or allowed to fall.

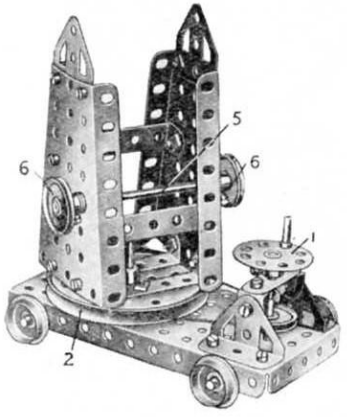


FIG. 2.44B

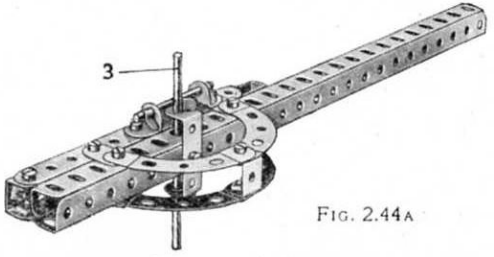
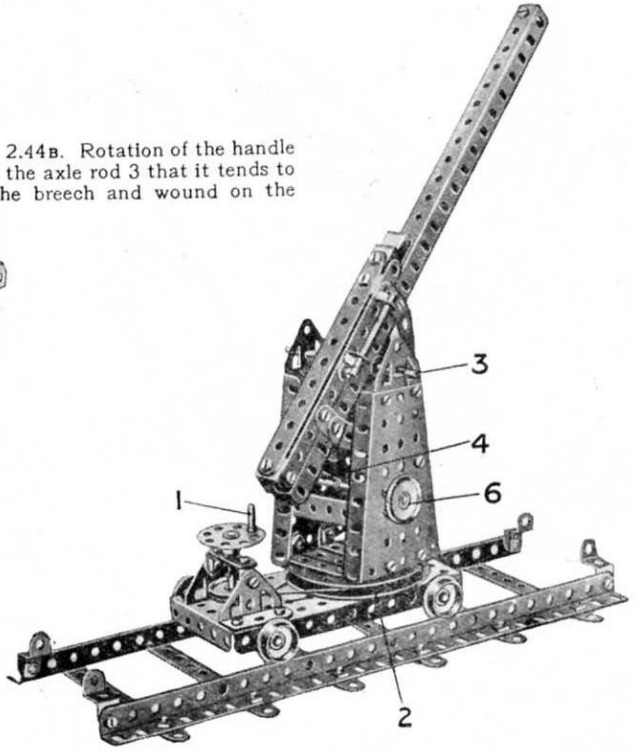


FIG. 2.44A

Parts required :

9	of No.	2
1	„ „	6A
4	„ „	8
4	„ „	10
3	„ „	11
5	„ „	12
4	„ „	16
2	„ „	17
1	of No.	19B
4	„ „	20B
4	„ „	22
1	„ „	24
8	„ „	35
57	„ „	37
6	„ „	38
1	„ „	44
4	of No.	48A
1	„ „	52
2	„ „	54
4	„ „	90A
1	„ „	115
2	„ „	126
2	„ „	126A

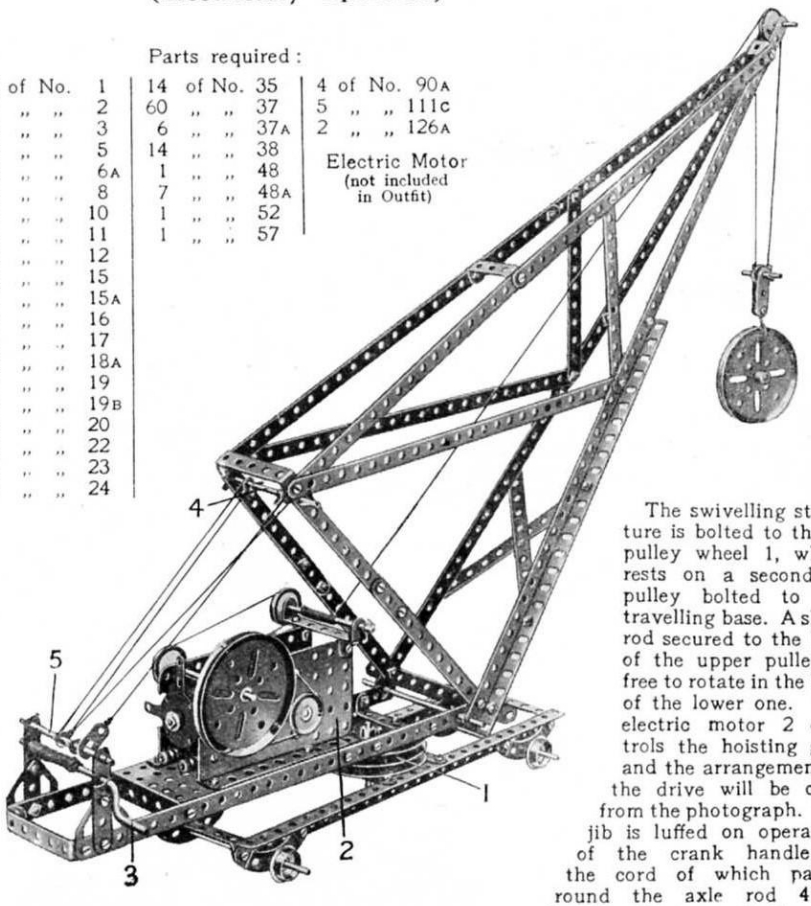


Model No. 2.45 Travelling Jib Crane
(Electrically Operated)

Parts required :

10	of No.	1	14	of No.	35	4	of No.	90A
9	„ „	2	60	„ „	37	5	„ „	111C
2	„ „	3	6	„ „	37A	2	„ „	126A
2	„ „	5	14	„ „	38			
2	„ „	6A	1	„ „	48			
4	„ „	8	7	„ „	48A			
1	„ „	10	1	„ „	52			
1	„ „	11	1	„ „	57			
2	„ „	12						
2	„ „	15						
1	„ „	15A						
2	„ „	16						
1	„ „	17						
2	„ „	18A						
1	„ „	19						
4	„ „	19B						
4	„ „	20						
4	„ „	22						
1	„ „	23						
1	„ „	24						

Electric Motor (not included in Outfit)



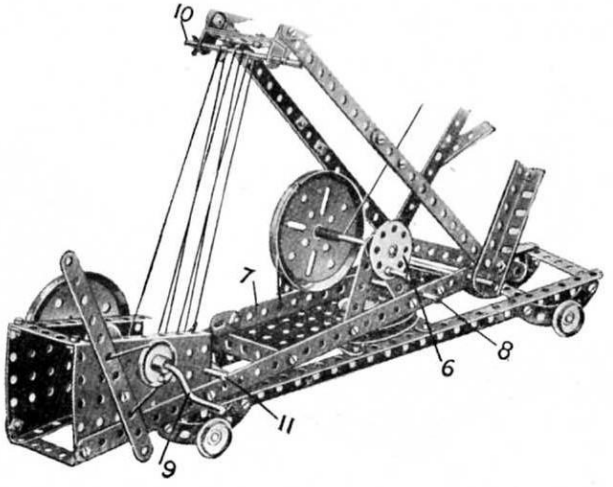
The swivelling structure is bolted to the 3" pulley wheel 1, which rests on a second 3" pulley bolted to the travelling base. A short rod secured to the boss of the upper pulley is free to rotate in the boss of the lower one. The electric motor 2 controls the hoisting gear and the arrangement of the drive will be clear from the photograph. The jib is luffed on operation of the crank handle 3, the cord of which passes round the axle rod 4 in the jib, then round the rod 5 in the base, back round the rod 4 and is finally secured to a flat bracket on the rod 5.

Model No. 2.46 Travelling Jib Crane
(Hand Operated)

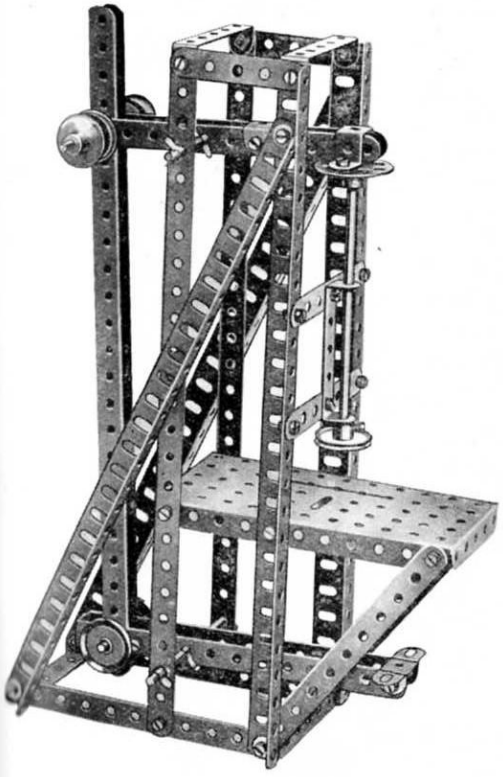
This shows a section of Model No. 2.45 fitted for hand operation, thus dispensing with the necessity of the electric motor. In this case the hoisting cord is operated by the hand wheel 6, the rod of which is controlled by a band brake 7. The end hole of the lever of the latter is pivotally mounted on the rod 8. The luffing movement of the jib is effected by the crank handle 9. The operating cord passes round the rod 10 attached to the jib, then round rod 11 in the base of the model, again round rod 10, back round rod 11, and once more round rod 10. The end of the cord is then tied to a flat bracket on the rod 11.

Parts required :

10	of No.	1	1	of No.	11	4	of No.	20	7	of No.	48A
11	„ „	2	1	„ „	15	4	„ „	22	1	„ „	52
2	„ „	3	1	„ „	15A	1	„ „	23	2	„ „	54
6	„ „	5	5	„ „	16	1	„ „	24	1	„ „	57
2	„ „	6A	2	„ „	18A	12	„ „	35	1	„ „	62
4	„ „	3	1	„ „	19	57	„ „	37	4	„ „	90A
3	„ „	10	4	„ „	19B	1	„ „	48	1	„ „	111C
						1	of No.	115			



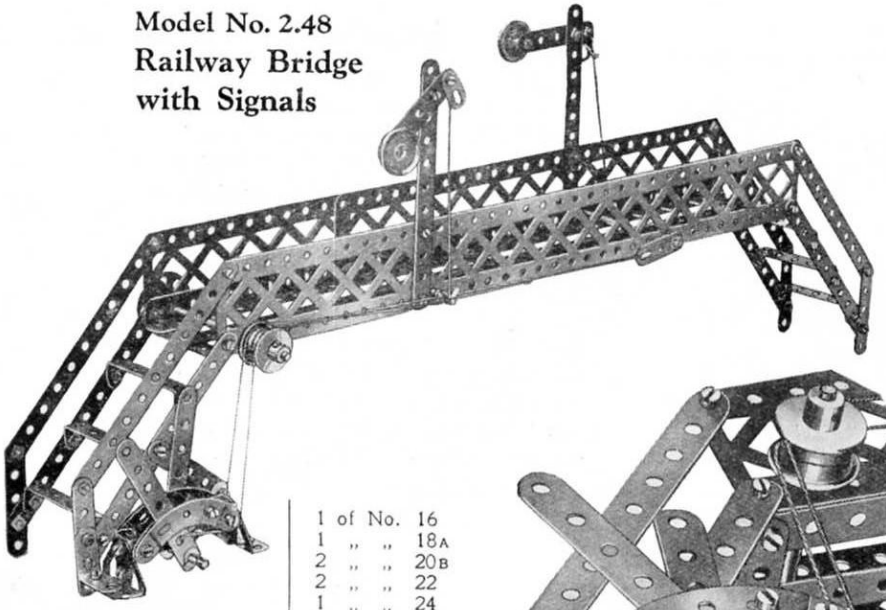
Model No. 2.47 Embossing Machine



Parts required:

4	of	No.	1
8	„	„	2
2	„	„	3
2	„	„	5
4	„	„	8
3	„	„	11
2	„	„	12
1	„	„	15
3	„	„	16
1	„	„	18A
4	„	„	20B
3	„	„	22
1	„	„	24
10	„	„	35
34	„	„	37
8	„	„	38
1	„	„	45
5	„	„	48A
1	„	„	52

Model No. 2.48 Railway Bridge with Signals



Parts required:

2	of	No.	1
10	„	„	2
2	„	„	3
8	„	„	5
4	„	„	8
2	„	„	10
3	„	„	11
2	„	„	12A
1	„	„	15A
1	of	No.	16
1	„	„	18A
2	„	„	20B
2	„	„	22
1	„	„	24
3	„	„	35
60	„	„	37
3	„	„	37A
6	„	„	38
7	„	„	48A
2	„	„	62
4	„	„	90A
2	„	„	99
2	„	„	100
3	„	„	111C
1	„	„	115
2	„	„	126

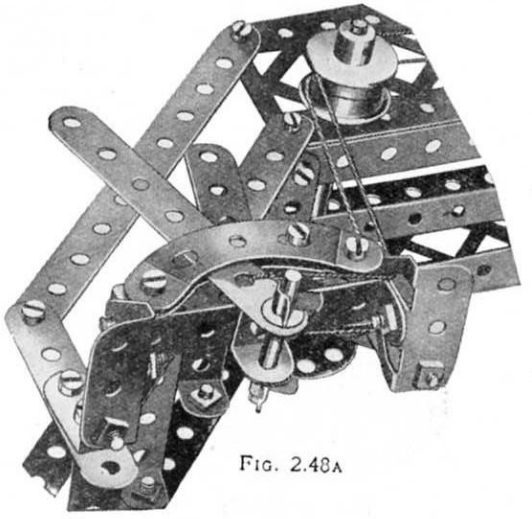
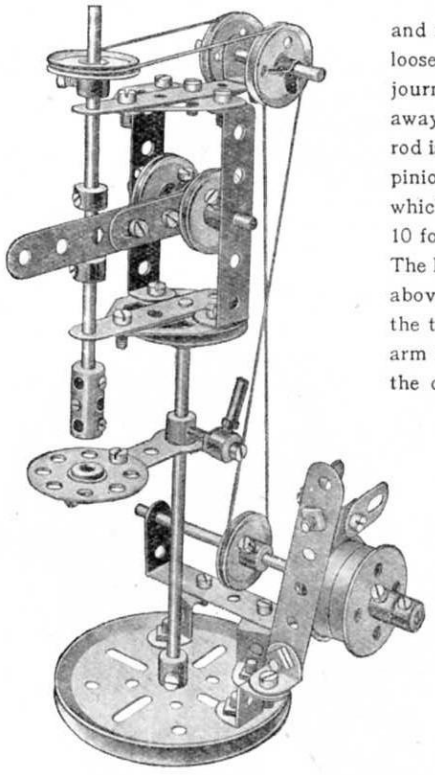


FIG. 2.48A

HOW TO CONTINUE

This completes our examples of models that may be made with MECCANO Outfit No. 2. The next models are a little more advanced, requiring a number of extra parts to construct them. The necessary parts are all contained in a No. 2A Accessory Outfit, the price of which will be found in the List at the end of this Manual.

Model No. 3.1 Drilling Machine



Parts required :

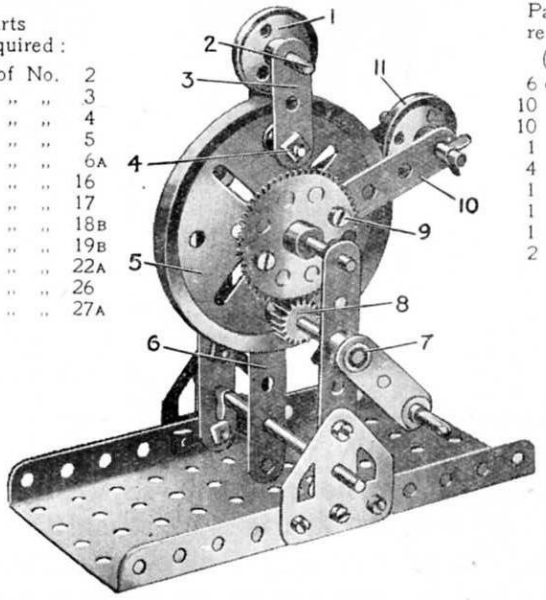
2	of	No.	4	1	of	No.	19B	2	of No. 48A
2	,,	,,	5	2	,,	,,	20B	5	,, ,, 59
2	,,	,,	10	1	,,	,,	21	2	,, ,, 62
2	,,	,,	11	4	,,	,,	22	1	,, ,, 63
1	,,	,,	12	2	,,	,,	22A	1	,, ,, 111
1	,,	,,	15	1	,,	,,	24	1	,, ,, 115
2	,,	,,	15A	2	,,	,,	35	3	,, ,, 125
2	,,	,,	17	21	,,	,,	37	2	,, ,, 126A
				1	,,	,,	46		

Model No. 3.2 Strip-Bending Machine

This model represents a device for bending bars or rods of metal to circular form, and may be put to practical purpose in shaping strips of tin or similar material. A loose pulley 1 is spaced by a collar and washers in the centre of the short rod 2 journalled in a 1½" strip 3. The latter is secured to the end of a ¾" bolt 4 and spaced away from the 3" pulley 5 by means of a number of washers. The opposite end of the rod is supported by a 5½" strip 6. The handle 7 is secured to a 3½" rod carrying a ½" pinion 8. This engages with a 57-teeth gear wheel 9 mounted on another 3½" rod which is free to revolve in the boss of the wheel 5. The gear wheel 9 carries a 3" strip 10 forming one of the bearings for a short rod carrying a second 1" loose pulley 11. The latter is also spaced by means of a collar and washers so that it lies immediately above the groove of the pulley wheel 5. The material to be shaped is passed between the two loose pulleys at the top of the wheel 5, and on rotation of the handle 7 the arm 10 is caused to move downward, so forcing the object to the same curvature as the circumference of the wheel.

Parts required :

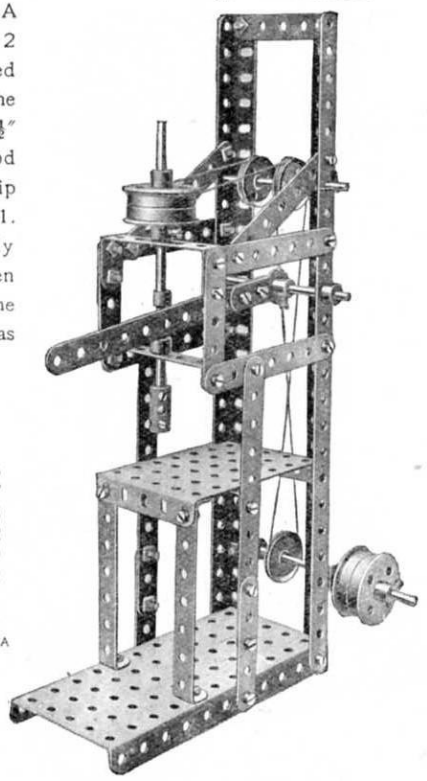
1	of	No.	2
2	,,	,,	3
1	,,	,,	4
1	,,	,,	5
1	,,	,,	6A
2	,,	,,	16
1	,,	,,	17
2	,,	,,	18B
1	,,	,,	19B
2	,,	,,	22A
1	,,	,,	26
1	,,	,,	27A



Parts required : (*continued*)

6	of	No.	35
10	,,	,,	37
10	,,	,,	38
1	,,	,,	52
4	,,	,,	59
1	,,	,,	62
1	,,	,,	111
1	,,	,,	115
2	,,	,,	126A

Model No. 3.3 Boring Machine

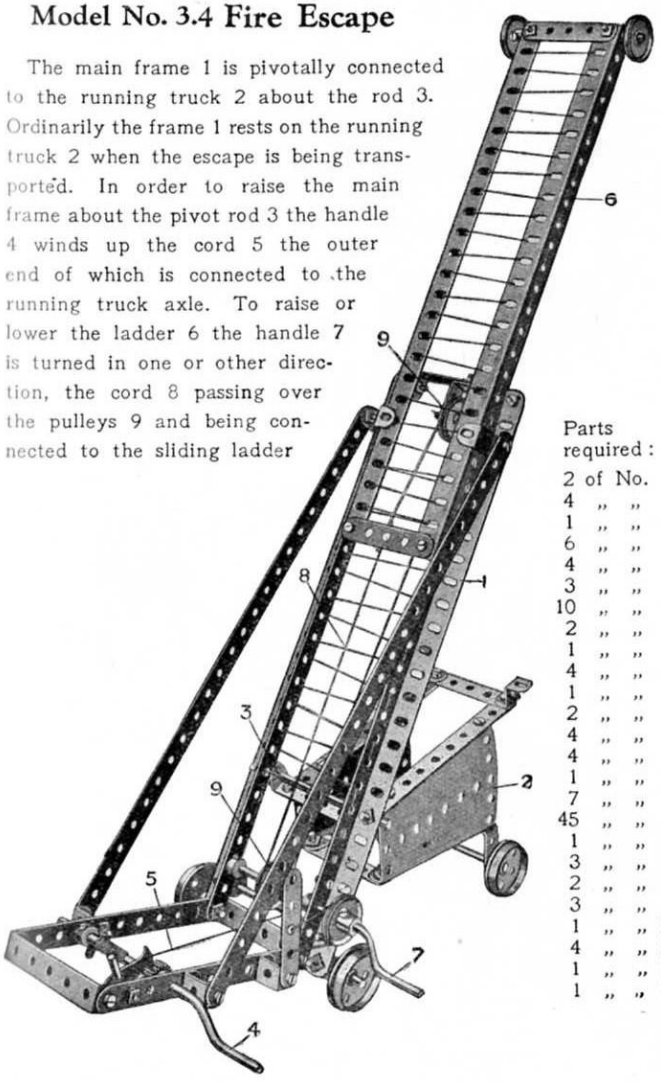


Parts required :

3	of	No.	2	4	of	No.	20B	2	of No. 48B
6	,,	,,	3	1	,,	,,	22	1	,, ,, 52
5	,,	,,	5	2	,,	,,	22A	1	,, ,, 53
2	,,	,,	8	3	,,	,,	35	4	,, ,, 59
2	,,	,,	11	38	,,	,,	37	1	,, ,, 62
2	,,	,,	15	1	,,	,,	46	1	,, ,, 63
2	,,	,,	16	2	,,	,,	48A		

Model No. 3.4 Fire Escape

The main frame 1 is pivotally connected to the running truck 2 about the rod 3. Ordinarily the frame 1 rests on the running truck 2 when the escape is being transported. In order to raise the main frame about the pivot rod 3 the handle 4 winds up the cord 5 the outer end of which is connected to the running truck axle. To raise or lower the ladder 6 the handle 7 is turned in one or other direction, the cord 8 passing over the pulleys 9 and being connected to the sliding ladder



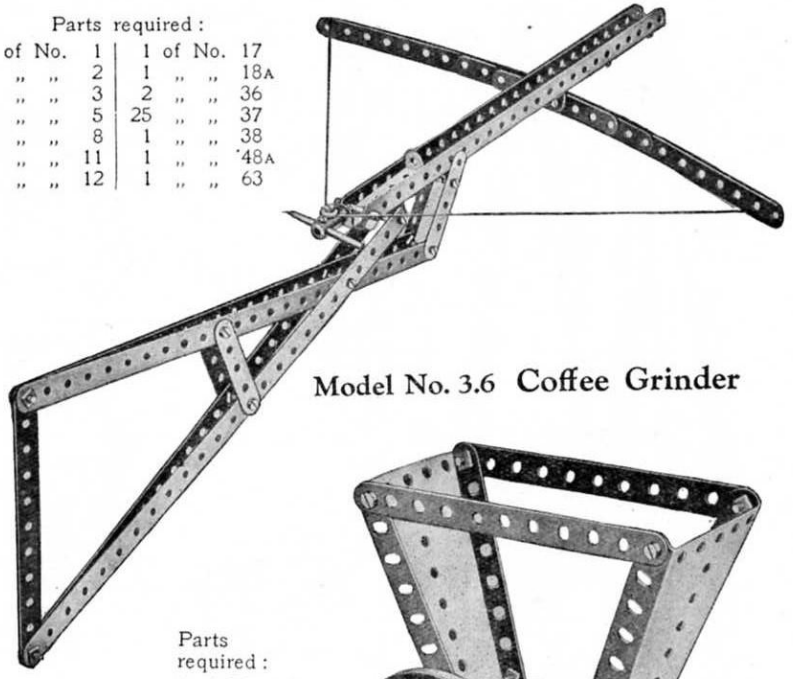
Parts required :

2	of	No.	1
4	„	„	2
1	„	„	3
6	„	„	5
4	„	„	8
3	„	„	11
10	„	„	12
2	„	„	12A
1	„	„	15A
4	„	„	16
1	„	„	18A
2	„	„	19
4	„	„	20B
4	„	„	22
1	„	„	22A
7	„	„	35
45	„	„	37
1	„	„	44
3	„	„	48A
2	„	„	54
3	„	„	59
1	„	„	115
4	„	„	125
1	„	„	147
1	„	„	148

Model No. 3.5 Crossbow

Parts required :

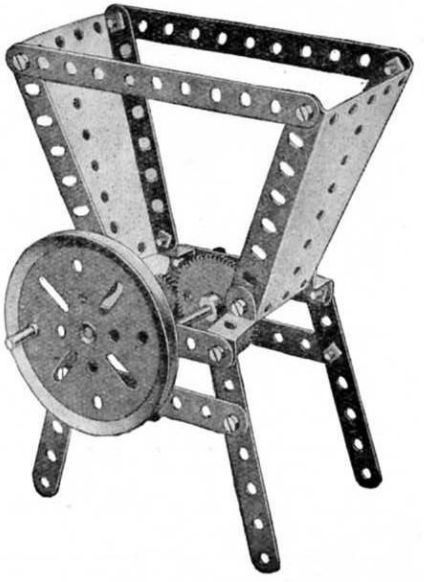
5	of	No.	1	1	of	No.	17
2	„	„	2	1	„	„	18A
1	„	„	3	2	„	„	36
4	„	„	5	25	„	„	37
2	„	„	8	1	„	„	38
2	„	„	11	1	„	„	48A
1	„	„	12	1	„	„	63



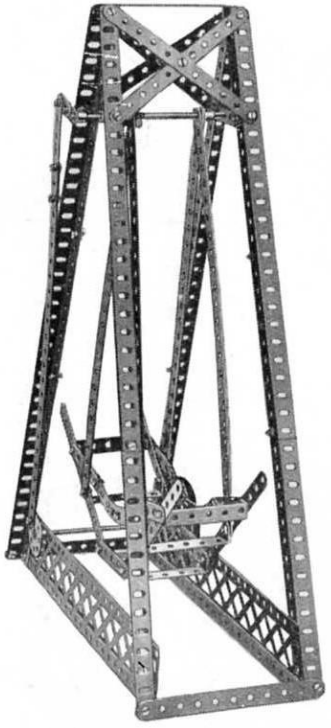
Model No. 3.6 Coffee Grinder

Parts required :

2	of	No.	2
6	„	„	3
2	„	„	4
2	„	„	16
1	„	„	19B
1	„	„	26
1	„	„	27A
16	„	„	37
2	„	„	54
3	„	„	59
1	„	„	115
4	„	„	125



Model No. 3.7 Swing



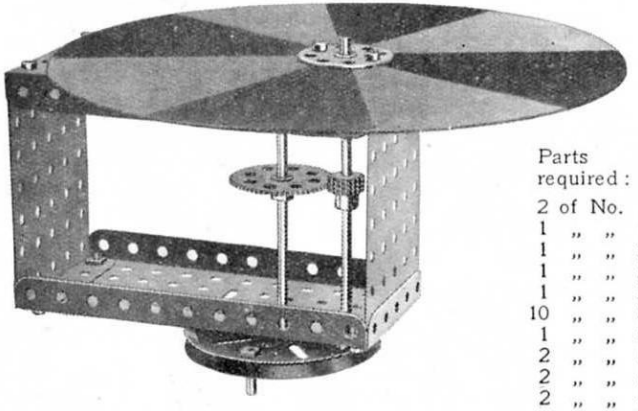
Parts required :

7	of No.	1	56	of No.	37
10	„ „	2	4	„ „	37A
8	„ „	5	6	„ „	48A
8	„ „	8	1	„ „	48B
1	„ „	10	2	„ „	59
2	„ „	15	2	„ „	62
1	„ „	19B	4	„ „	90A
1	„ „	24	2	„ „	99
2	„ „	35	2	„ „	111c

1 of No. 115

Model No. 3.8 Newton's Disc

This model demonstrates that the colours of the spectrum, which are most simply produced by directing a ray of white light through a prism, can be re-combined to form white light. The cardboard disc is divided into equal sectors, and the seven colours of the spectrum—red, orange, yellow, green, blue, indigo, and violet—are painted on separate sectors. If the disc is rotated at a high speed by means of the hand wheel and the gears shown, the disc appears to be of a greyish-white colour.

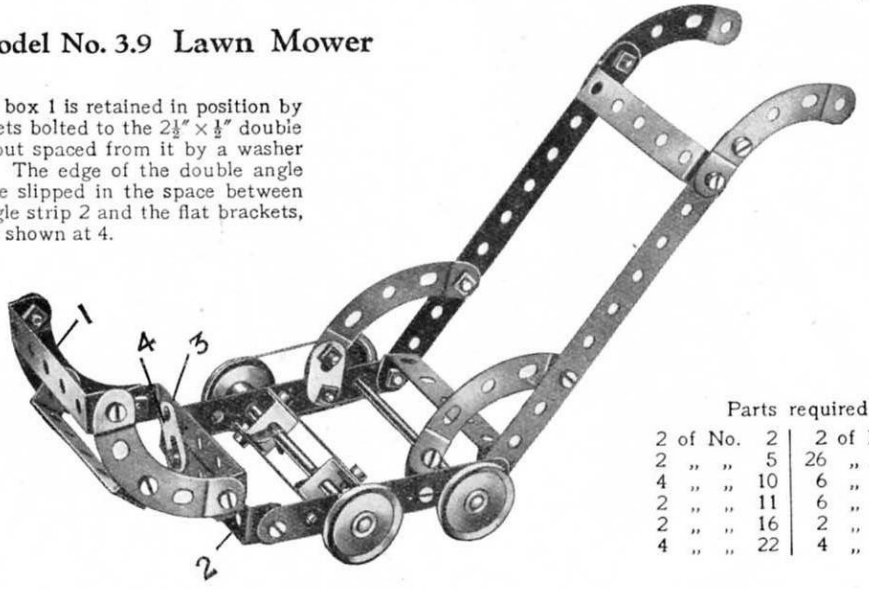


Parts required :

2	of No.	15	
1	„ „	19B	
1	„ „	24	
1	„ „	26	
1	„ „	27A	
10	„ „	37	
1	„ „	38	
2	„ „	52	
2	„ „	53	
2	„ „	59	
1	„ „	115	

Model No. 3.9 Lawn Mower

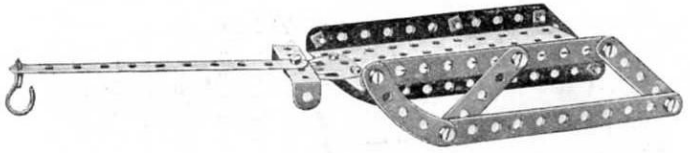
The grass box 1 is retained in position by two flat brackets bolted to the $2\frac{1}{2}'' \times \frac{1}{2}''$ double angle strip 2 but spaced from it by a washer on each bolt. The edge of the double angle strip 3 may be slipped in the space between the double angle strip 2 and the flat brackets, one of which is shown at 4.



Parts required :

2	of No.	2	2	of No.	35
2	„ „	5	26	„ „	37
4	„ „	10	6	„ „	38
2	„ „	11	6	„ „	48A
2	„ „	16	2	„ „	90
4	„ „	22	4	„ „	90A

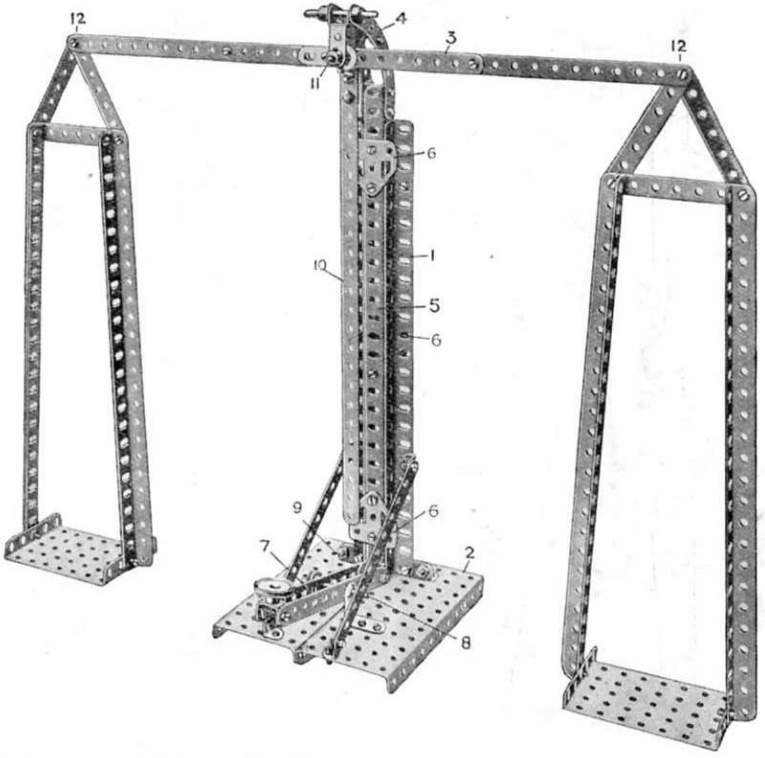
Model No. 3.10 Horse Sleigh



Parts required :

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

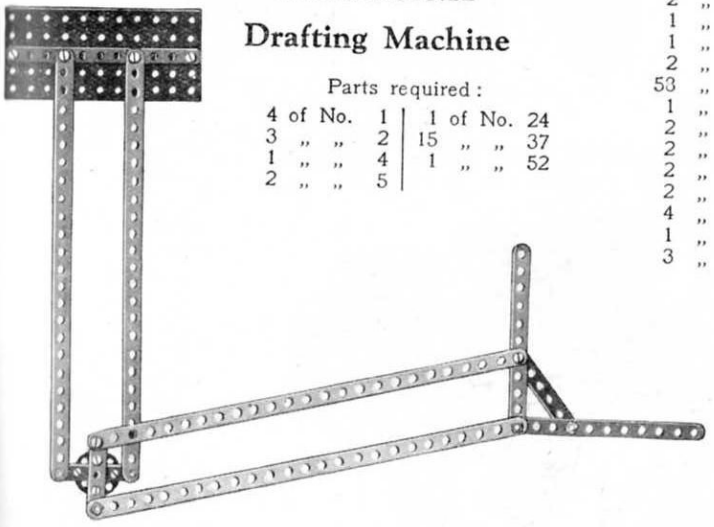
Model No. 3.11 Demonstration Scales



Parts required :

3 of No.	1
4 „ „	2
6 „ „	3
1 „ „	4
2 „ „	5
8 „ „	8
4 „ „	11
6 „ „	12
2 „ „	12A
2 „ „	17
1 „ „	18A
1 „ „	22
2 „ „	35
53 „ „	37
1 „ „	44
2 „ „	52
2 „ „	53
2 „ „	59
2 „ „	62
4 „ „	90
1 „ „	125
3 „ „	126A

Model No. 3.12 Drafting Machine

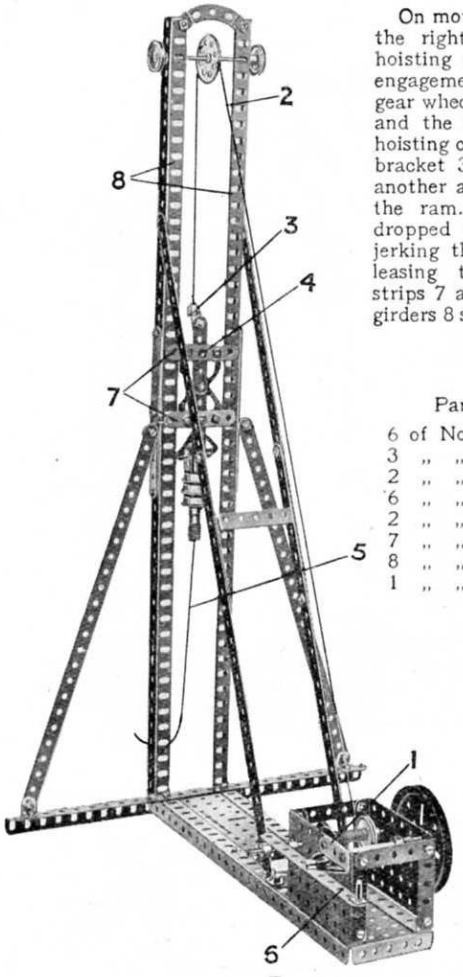


Parts required :

4 of No. 1	1 of No. 24
3 „ „ 2	15 „ „ 37
1 „ „ 4	1 „ „ 52
2 „ „ 5	

The only feature of this model which needs description is the standard, which is built up of two angle girders 1 bolted to the base 2 by angle brackets and spaced apart at the top by a 2½" strip obliquely disposed. The balance lever 3 is pivotally carried in curved strips 4 bolted to the top of two angle girders 5 sliding between the girders 1. The girders 5 are themselves bolted together and in order to guide them as they slide vertically flat trunnions 6 are bolted at the front and rear. The balance is raised by depressing the lever 8 pivoted at 9 and pivotally connected at 11 to the vertically sliding girders 5. The indicator 10 is bolted to a crank at the rear, the boss of which is fitted on the pivot rod 11. The connections at 12 are lock-nutted to allow free action.

Model No. 3.13 Pile Driver

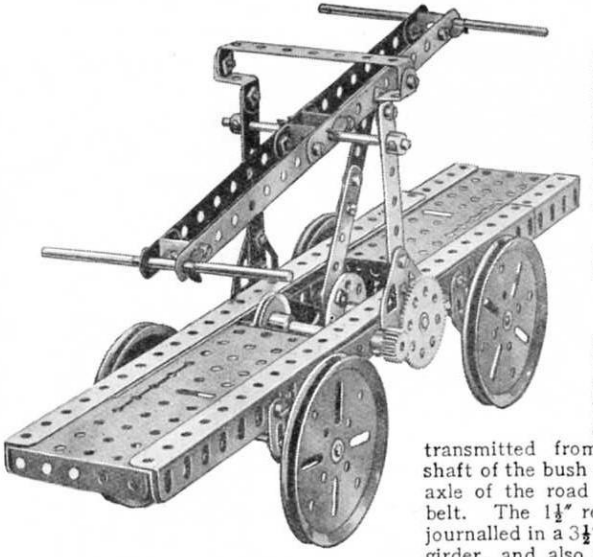


On moving the hand lever 6 to the right a ½" pinion on the hoisting shaft is brought into engagement with the 57-teeth gear wheel 1 on the driving shaft and the ram 4 is raised. The hoisting cord 2 is tied to an angle bracket 3, which lodges under another angle bracket bolted to the ram. The latter may be dropped whenever required by jerking the cord 5, thereby releasing the brackets 3. The strips 7 are duplicated, and the girders 8 slide between their ends.

Parts required :

6	of No.	1	3	of No	16
3	„ „	2	1	„ „	19B
2	„ „	3	3	„ „	20B
6	„ „	5	1	„ „	21
2	„ „	6A	2	„ „	22
7	„ „	8	1	„ „	26
8	„ „	12	1	„ „	27A
1	„ „	15A	1	„ „	32
			2	„ „	35
			60	„ „	37
			2	„ „	37A
			1	„ „	38
			1	„ „	45
			1	„ „	46
			1	„ „	48A
			2	„ „	48B
			2	„ „	52
			2	„ „	53
			4	„ „	59
			1	„ „	90A
			1	„ „	111C
			1	„ „	115
			2	„ „	126
			2	„ „	126A

Model No. 3.14 Hand Trolley

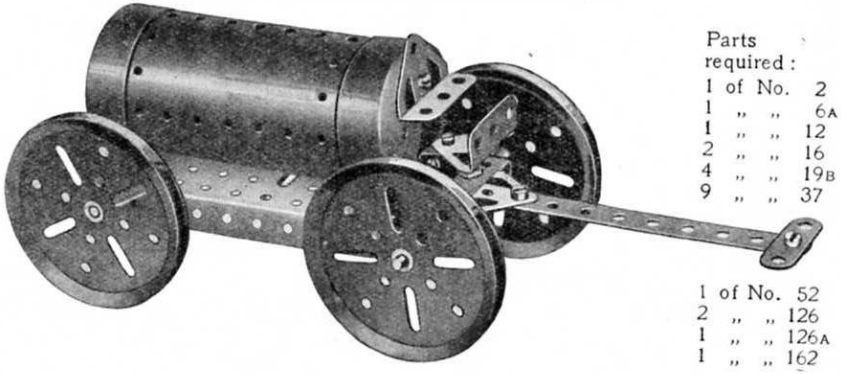


Parts required :

4	of No.	2	1	of No.	24
3	„ „	3	1	„ „	26
2	„ „	5	1	„ „	27A
4	„ „	8	6	„ „	35
8	„ „	10	40	„ „	37
4	„ „	11	1	„ „	45
2	„ „	15A	1	„ „	48B
4	„ „	16	2	„ „	52
1	„ „	18A	3	„ „	59
4	„ „	19B	4	„ „	90A
2	„ „	22	2	„ „	125
			2	of No.	126A

The connecting arm is pivoted at its lower end to the bush wheel and at its upper end to the hand lever a bolt and two nuts being used to pivot the arm in each case. The drive is transmitted from the 1" pulley wheel on the shaft of the bush wheel to a similar pulley on the axle of the road wheels by means of a crossed belt. The 1½" rod carrying the bush wheel is journalled in a 3½" strip fastened to the side angle girder, and also in a double bent strip secured to the inside of the girder.

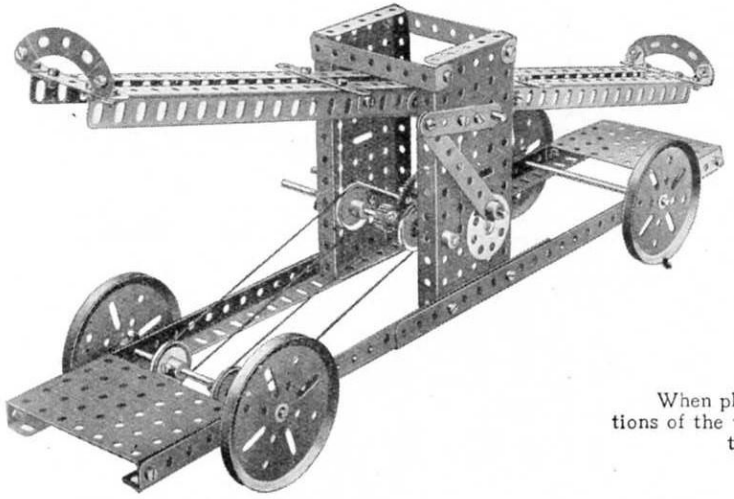
Model No. 3.15 Tank Wagon



Parts required :

1	of No.	2
1	„ „	6A
1	„ „	12
2	„ „	16
4	„ „	19B
9	„ „	37
1	of No.	52
2	„ „	126
1	„ „	126A
1	„ „	162

Model No. 3.16 Actuated See-Saw



Parts required :

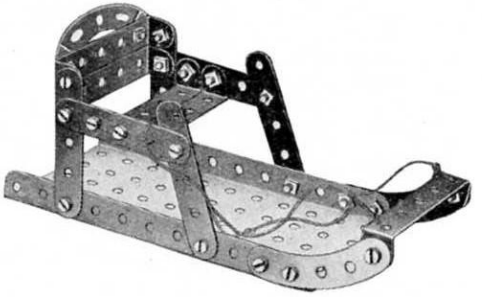
1	of No.	3	4	of No.	22	2	of No.	52
6	„ „	5	1	„ „	24	2	„ „	53
8	„ „	8	1	„ „	26	3	„ „	59
4	„ „	12	1	„ „	27A	2	„ „	62
2	„ „	15	2	„ „	35	2	„ „	90A
3	„ „	15A	43	„ „	37	1	„ „	111C
4	„ „	19B	2	„ „	37A	1	„ „	115
			2	„ „	48B			

The model is actuated by the motion of one pair of travelling wheels. The axle to which these wheels are secured carries two 1″ fast pulley wheels, which are connected by endless cords to similar pulleys on the same rod as a ½″ pinion wheel. This ½″ pinion meshes with a 57-teeth gear wheel secured to the rod of a bush wheel, and the latter is connected by means of a 5½″ strip to an extended crank (a 2½″ strip and a crank bolted together) secured to the pivotal rod of the see-saw.

Model No. 3.17 Toboggan

Parts required :

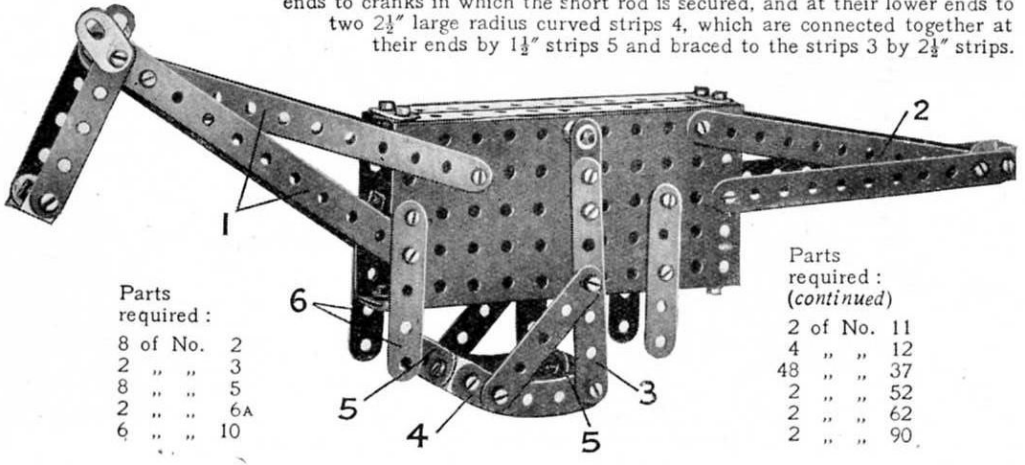
6	of No.	5
22	„ „	37
5	„ „	48A
1	„ „	52
2	„ „	90
1	„ „	90A



Model No. 3.18 The Meccangaroo

When placed upon an incline the "Meccangaroo" will "walk" with a quaint action. The positions of the various strips in relation to the body should be reproduced as accurately as possible, for the successful working of the model depends upon them.

The animal rocks about a short rod secured between the rocker-frame which does duty as "legs." This frame consists of two 3½″ strips 3 bolted at their upper ends to cranks in which the short rod is secured, and at their lower ends to two 2½″ large radius curved strips 4, which are connected together at their ends by 1½″ strips 5 and braced to the strips 3 by 2½″ strips.



Parts required :

8	of No.	2
2	„ „	3
8	„ „	5
2	„ „	6A
6	„ „	10

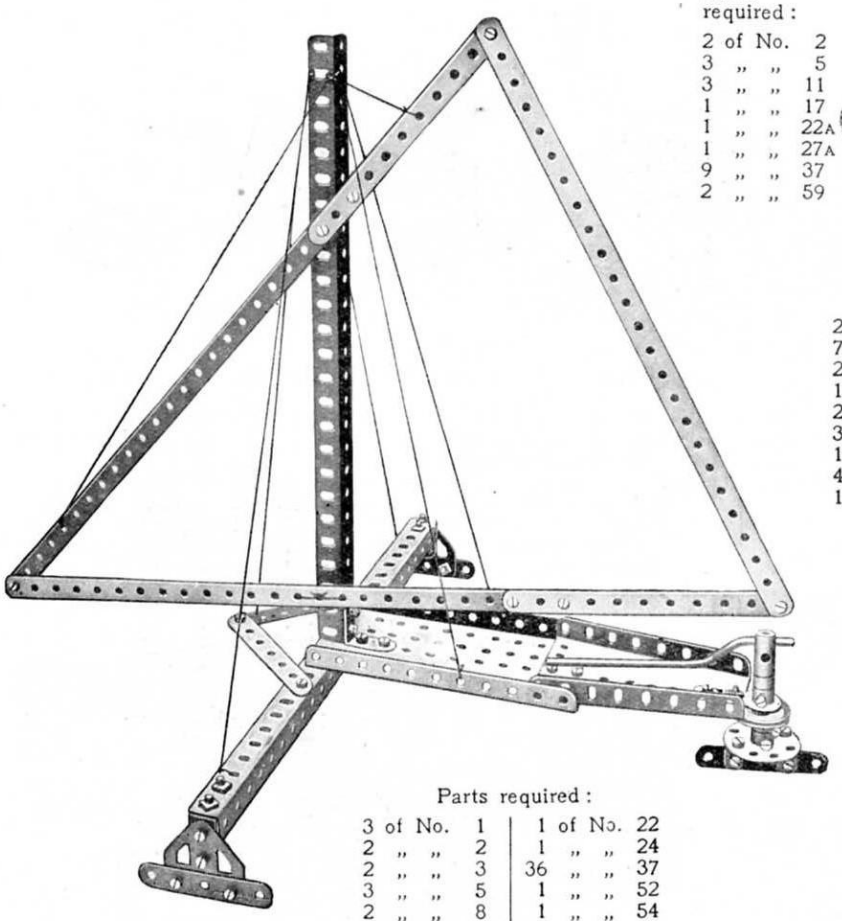
Parts required : (*continued*)

2	of No.	11
4	„ „	12
48	„ „	37
2	„ „	52
2	„ „	62
2	„ „	90

Model No. 3.19 Ice Boat

Parts required :

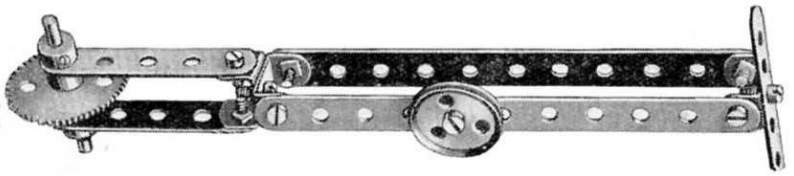
2	of No.	2
3	„ „	5
3	„ „	11
1	„ „	17
1	„ „	22A
1	„ „	27A
9	„ „	37
2	„ „	59



Parts required :

3	of No.	1	1	of No.	22
2	„ „	2	1	„ „	24
2	„ „	3	36	„ „	37
3	„ „	5	1	„ „	52
2	„ „	8	1	„ „	54
2	„ „	12	1	„ „	59
3	„ „	12A	1	„ „	62
1	„ „	17	1	„ „	63
1	„ „	19S	2	„ „	126A

Model No. 3.20 Pastry Designer



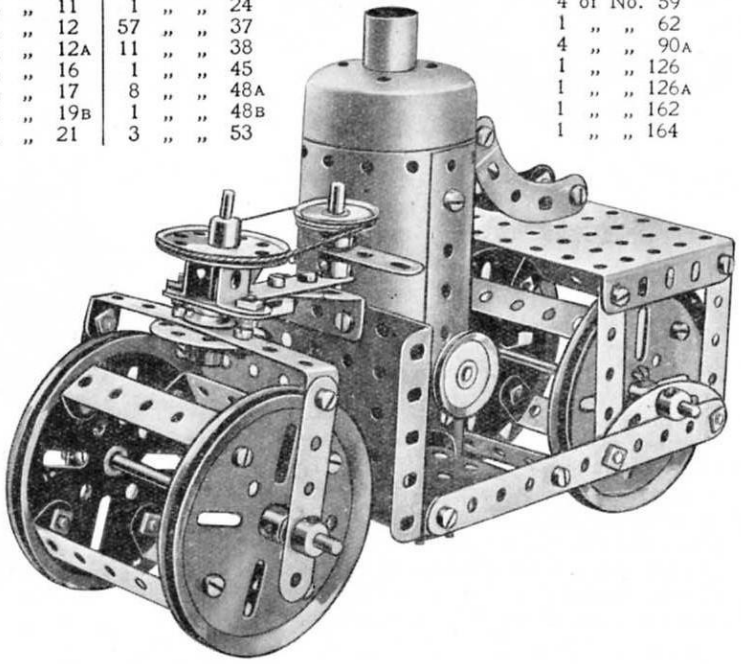
Model No. 3.21 Steam Road Roller

Parts required :

2	of No.	2	3	of No.	22
7	„ „	5	1	„ „	23
2	„ „	11	1	„ „	24
1	„ „	12	57	„ „	37
2	„ „	12A	11	„ „	38
3	„ „	16	1	„ „	45
1	„ „	17	8	„ „	48A
4	„ „	19B	1	„ „	48B
1	„ „	21	3	„ „	53

Parts required : (*continued*)

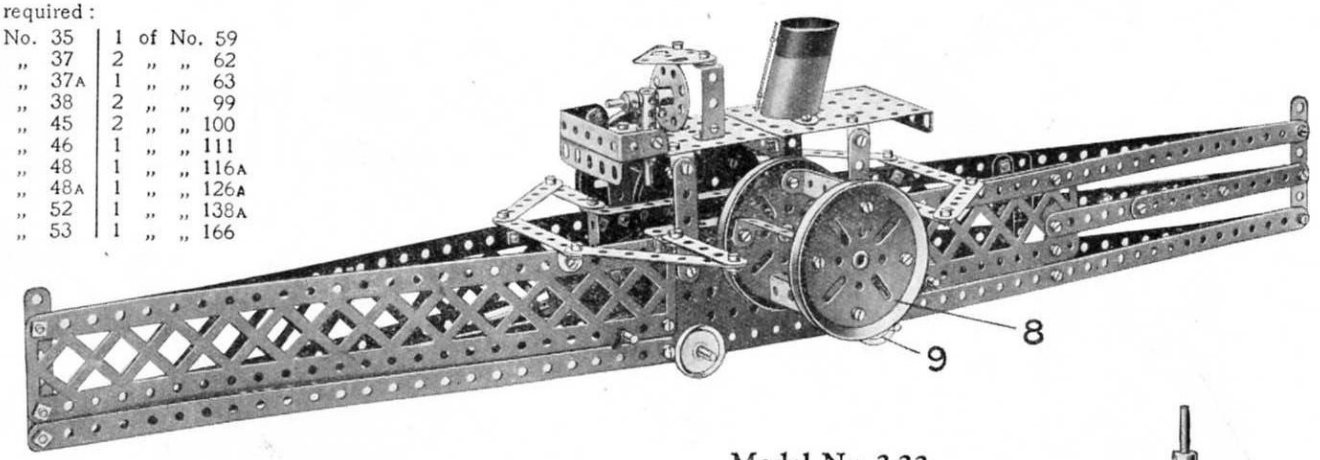
4	of No.	59
1	„ „	62
4	„ „	90A
1	„ „	126
1	„ „	126A
1	„ „	162
1	„ „	164



Model No. 3.22 Paddle Boat

Parts required :

6	of	No.	1	4	of	No.	35	1	of	No.	59
4	„	„	2	94	„	„	37	2	„	„	62
6	„	„	3	3	„	„	37A	1	„	„	63
2	„	„	4	6	„	„	38	2	„	„	99
10	„	„	5	2	„	„	45	2	„	„	100
2	„	„	6A	1	„	„	46	1	„	„	111
14	„	„	12	2	„	„	48	1	„	„	116A
2	„	„	15	10	„	„	48A	1	„	„	126A
2	„	„	15A	2	„	„	52	1	„	„	138A
4	„	„	16	2	„	„	53	1	„	„	166
2	„	„	18A								
4	„	„	19B								
4	„	„	20B								
4	„	„	22								
1	„	„	24								



The paddle-wheels are secured to a crankshaft (see Fig. 3.22A) consisting of two 3½" axle rods 1, two cranks 2, and a ¾" bolt 3 secured to the central holes of the cranks. The two oscillating cylinders 4 are built up from two ¾" flanged wheels and a pair of sleeve pieces, the latter being bolted to the 2½" × ½" double angle strips 5, which are free to turn on rods 6. The ends of the 5" piston rods are secured in the bosses of two small fork pieces 7, which pivot about the ¾" bolt 3 of the crankshaft. As the model runs along the ground, the 3" pulley wheels 8 secured to the rods 1 are rotated by endless cords from the 1" fast pulley wheels 9, while the cylinders 4 oscillate and appear to be actually operating the paddle-wheels.

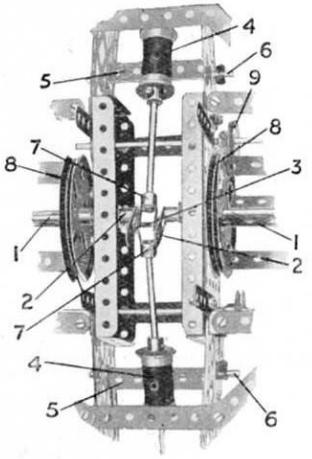
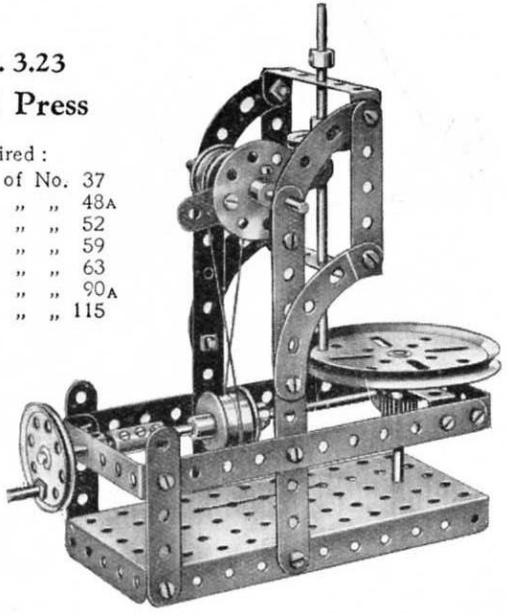


FIG. 3.22A

Model No. 3.23 Auto Dial Press

Parts required :

4	of	No.	2	22	of	No.	37
5	„	„	5	5	„	„	48A
2	„	„	15	1	„	„	52
1	„	„	16	3	„	„	59
1	„	„	17	1	„	„	63
1	„	„	18A	4	„	„	90A
1	„	„	19B	1	„	„	115
4	„	„	20B				
1	„	„	21				
1	„	„	22				
1	„	„	24				
1	„	„	26				
1	„	„	32				

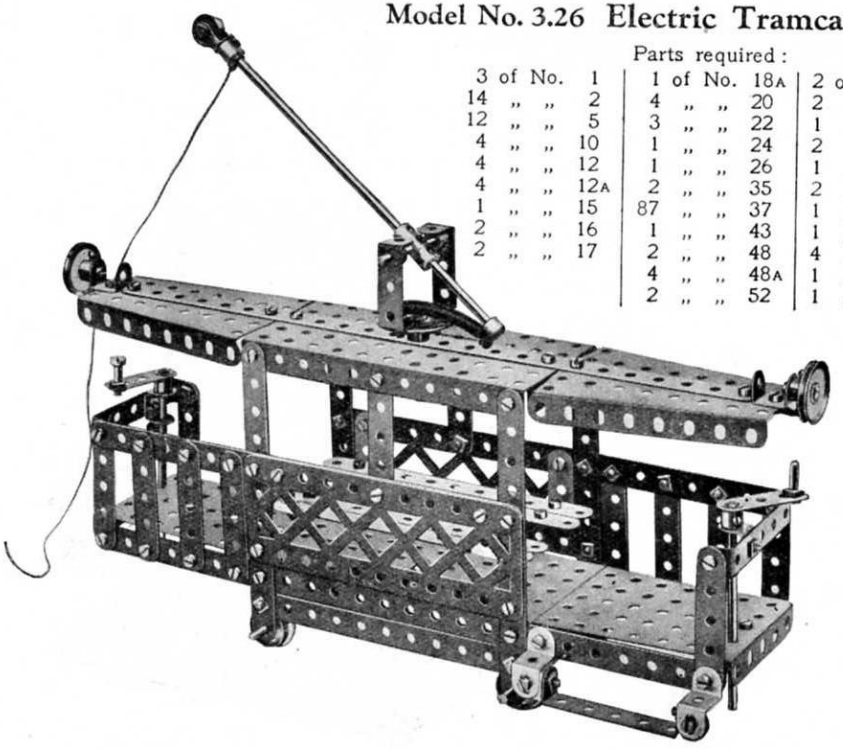


Model No. 3.24 Scarifier

Parts required :

7	of No.	2	1	of No.	18A
1	„ „	3	2	„ „	22
4	„ „	5	29	„ „	37
1	„ „	10	2	„ „	38
1	„ „	11	2	„ „	90
11	„ „	12	1	„ „	126A

Model No. 3.26 Electric Tramcar



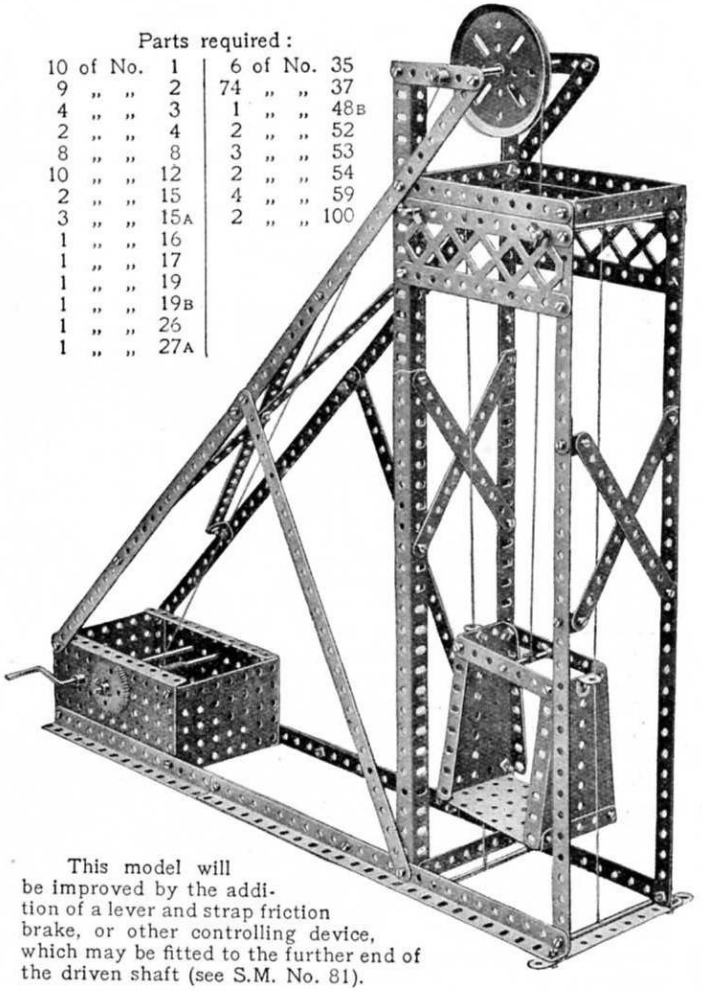
Parts required :

3	of No.	1	1	of No.	18A	2	of No.	53
14	„ „	2	4	„ „	20	2	„ „	54
12	„ „	5	3	„ „	22	1	„ „	59
4	„ „	10	1	„ „	24	2	„ „	62
4	„ „	12	1	„ „	26	1	„ „	63
4	„ „	12A	2	„ „	35	2	„ „	100
1	„ „	15	87	„ „	37	1	„ „	111C
2	„ „	16	1	„ „	43	1	„ „	115
2	„ „	17	2	„ „	48	4	„ „	125
			4	„ „	48A	1	„ „	116A
			2	„ „	52	1	„ „	147B

Model No. 3.25 Pit Head Gear

Parts required :

10	of No.	1	6	of No.	35
9	„ „	2	74	„ „	37
4	„ „	3	1	„ „	48B
2	„ „	4	2	„ „	52
8	„ „	8	3	„ „	53
10	„ „	12	2	„ „	54
2	„ „	15	4	„ „	59
3	„ „	15A	2	„ „	100
1	„ „	16			
1	„ „	17			
1	„ „	19			
1	„ „	19B			
1	„ „	26			
1	„ „	27A			



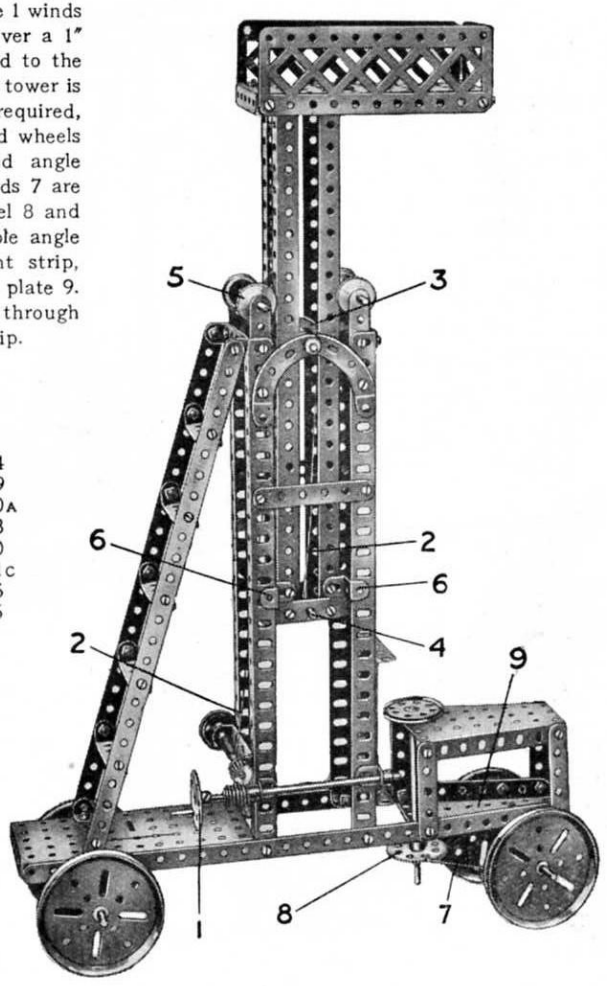
This model will be improved by the addition of a lever and strap friction brake, or other controlling device, which may be fitted to the further end of the driven shaft (see S.M. No. 81).

Model No. 3.27 Tower Wagon

When operated the handle 1 winds in the cord 2, which passes over a 1" fast pulley wheel 3 and is tied to the rod 4. The upper part of the tower is thus raised or lowered as required, being guided by the ¾" flanged wheels 5 and two pairs of reversed angle brackets 6. The steering cords 7 are tied to the 57-teeth gear wheel 8 and to the end of a 2½" × ½" double angle strip bolted to a double bent strip, which is pivoted to the sector plate 9. The front axle is journalled through the ends of the double angle strip.

Parts required:

4	of	No. 1	2	of	No. 54
2	„	„ 4	3	„	„ 59
6	„	„ 5	4	„	„ 90A
2	„	„ 6A	1	„	„ 98
8	„	„ 8	2	„	„ 100
8	„	„ 12	1	„	„ 111C
1	„	„ 15	1	„	„ 115
3	„	„ 15A	4	„	„ 125
4	„	„ 16			
1	„	„ 17			
4	„	„ 19B			
4	„	„ 20			
1	„	„ 21			
2	„	„ 22			
1	„	„ 24			
1	„	„ 26			
1	„	„ 27A			
1	„	„ 32			
3	„	„ 35			
84	„	„ 37			
2	„	„ 37A			
1	„	„ 45			
8	„	„ 48A			
2	„	„ 52			
1	„	„ 53			

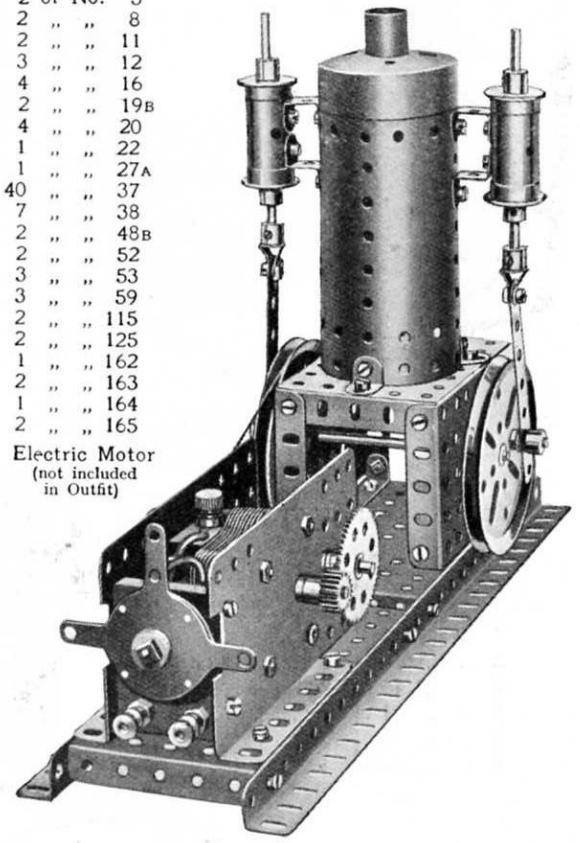


Model No. 3.28
Two-Cylinder Vertical Steam Engine

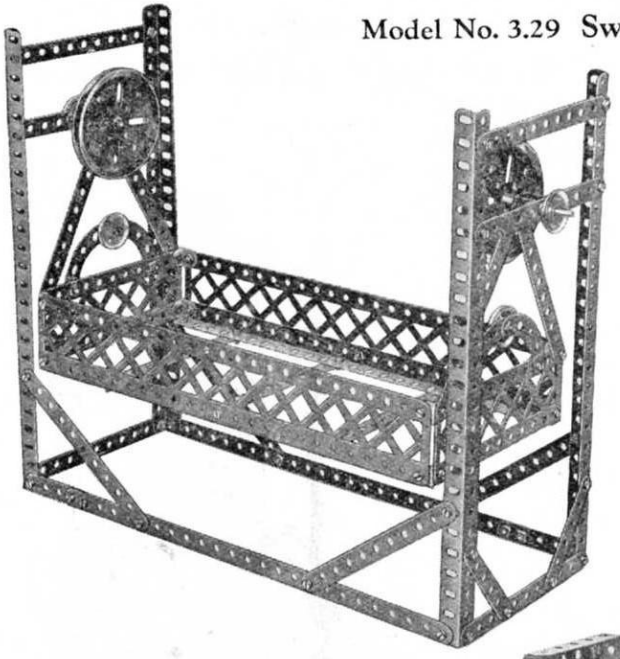
Parts required:

2	of	No. 3
2	„	„ 8
2	„	„ 11
3	„	„ 12
4	„	„ 16
2	„	„ 19B
4	„	„ 20
1	„	„ 22
1	„	„ 27A
40	„	„ 37
7	„	„ 38
2	„	„ 48B
2	„	„ 52
3	„	„ 53
3	„	„ 59
2	„	„ 115
2	„	„ 125
1	„	„ 162
2	„	„ 163
1	„	„ 164
2	„	„ 165

Electric Motor (not included in Outfit)



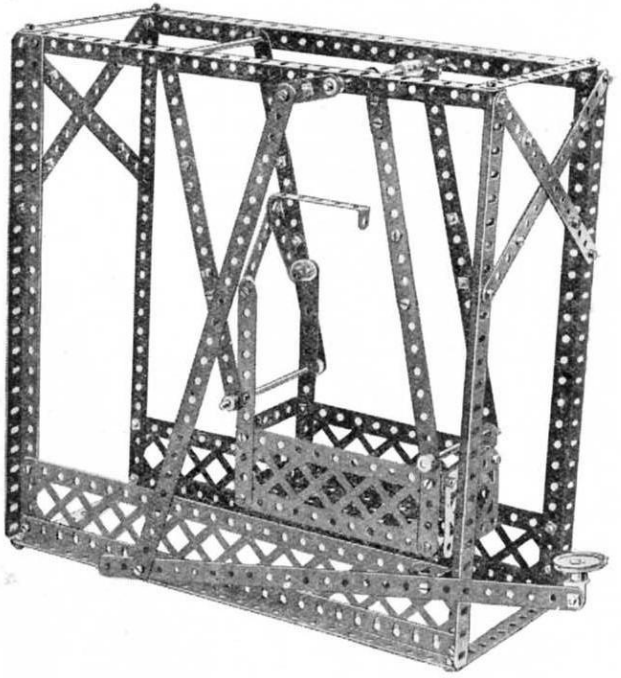
Model No. 3.29 Swinging Cot



Parts required :

2	of	No.	1	6	of	No.	37A
18	„	„	2	8	„	„	38
6	„	„	3	1	„	„	45
2	„	„	5	3	„	„	48A
8	„	„	8	1	„	„	52
3	„	„	12	4	„	„	59
1	„	„	15	2	„	„	62
1	„	„	15A	1	„	„	63
3	„	„	16	1	„	„	98
1	„	„	22	2	„	„	99c
10	„	„	35	2	„	„	100
68	„	„	37	4	„	„	111

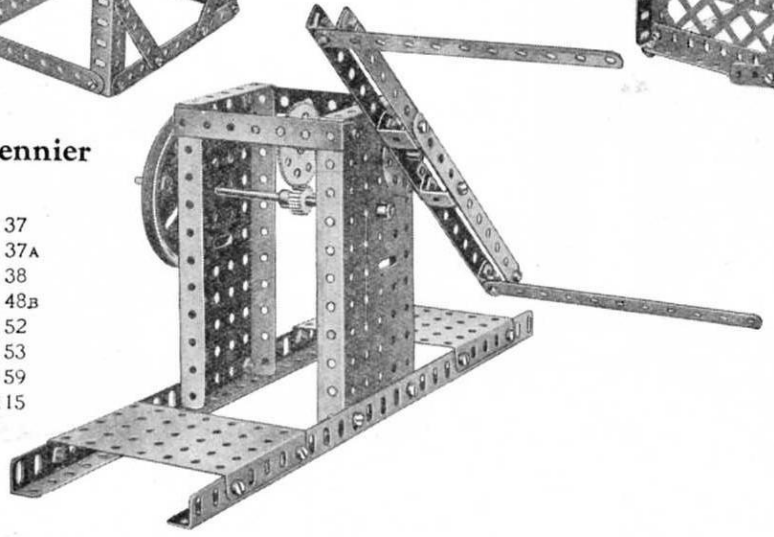
Model No. 3.30 Swing Boat



Parts required :

2	of	No.	1	2	of	No.	22A
17	„	„	2	64	„	„	37
4	„	„	5	2	„	„	37A
6	„	„	8	2	„	„	45
8	„	„	12	4	„	„	90A
2	„	„	17	2	„	„	99
2	„	„	19B	2	„	„	100
2	„	„	22	2	„	„	111c

Model No. 3.31 Lace Jennier



Parts required :

6	of	No.	2	28	of	No.	37
2	„	„	8	1	„	„	37A
4	„	„	11	4	„	„	38
2	„	„	15	2	„	„	48B
1	„	„	19B	2	„	„	52
1	„	„	24	2	„	„	53
1	„	„	26	2	„	„	59
1	„	„	27A	1	„	„	115

Model No. 3.32 Railway Gauge

Parts required :

2	of No.		2
1	„	„	6A
2	„	„	8
2	„	„	11
2	„	„	12
25	„	„	37
1	„	„	53
2	„	„	90A
2	„	„	126
2	„	„	126A

Model No. 3.33 Auto Swing Boat

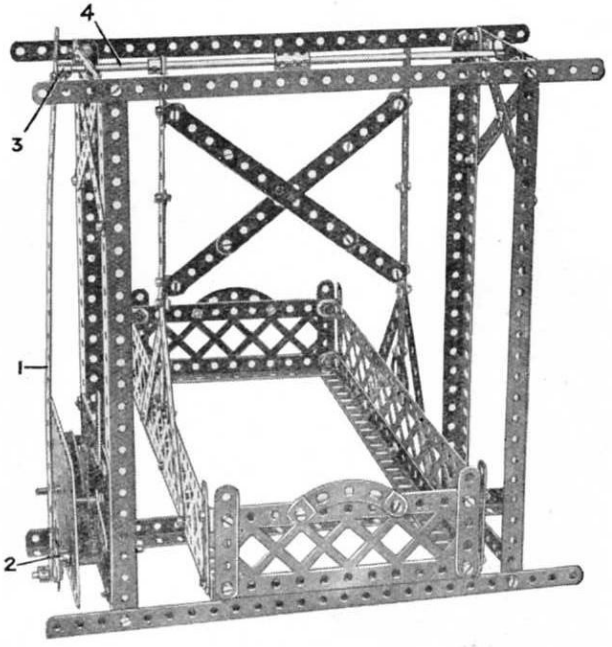
The connecting strip 1 is attached pivotally at one end to a threaded pin secured to the bush wheel 2 on the driving spindle of the motor, and at the other end by means of bolt and lock-nuts to a crank 3 mounted on the shaft 4, which operates the swing boat.

Parts required :

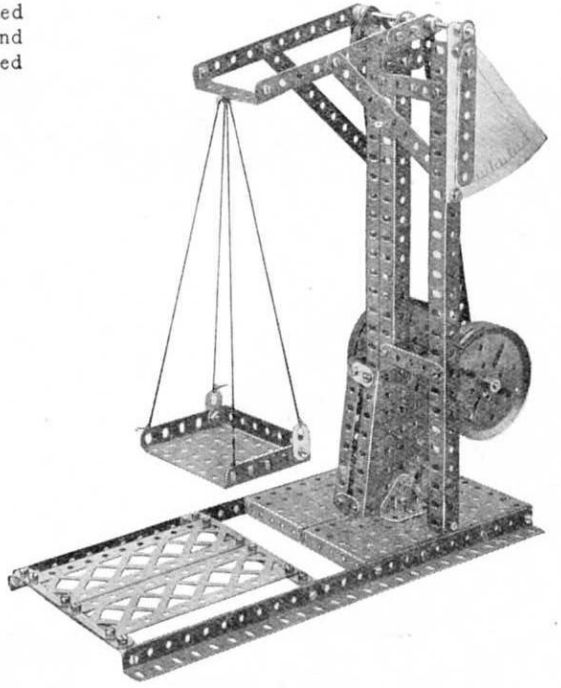
3	of No.	1	1	of No.	10	86	of No.	37	2	of No.	90A
16	„	„ 2	12	„	„ 12	2	„	„ 37A	2	„	„ 99
6	„	„ 3	2	„	„ 15	1	„	„ 59	2	„	„ 100
8	„	„ 5	1	„	„ 24	2	„	„ 62	1	„	„ 111c
8	„	„ 8	2	„	„ 35	1	„	„ 63	1	„	„ 115

2 of No. 126A

Clockwork Motor (not included in Outfit)

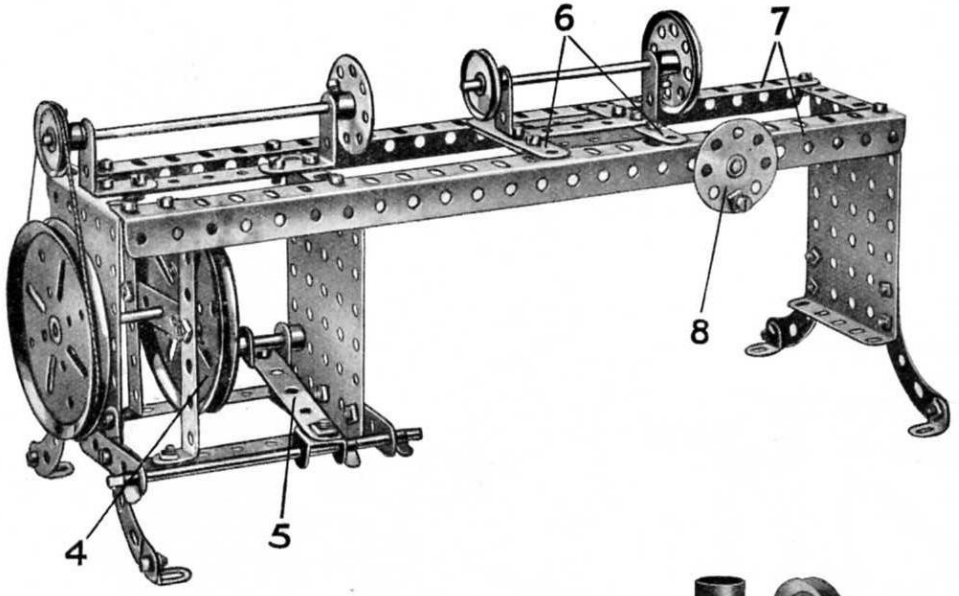


Model No. 3.34 Scales



Parts required :

10	of No.	2	2	of No.	48A
1	„	„ 3	1	„	„ 48B
2	„	„ 5	2	„	„ 52
5	„	„ 8	1	„	„ 53
7	„	„ 10	2	„	„ 54
5	„	„ 12	4	„	„ 59
2	„	„ 15A	2	„	„ 62
4	„	„ 19B	2	„	„ 100
67	„	„ 37	2	„	„ 126
2	„	„ 38	2	„	„ 126A



Model No. 3.35 Lathe

The arrangement of the treadle is shown in detail in Fig. 3.35A. The crank 1 is provided with a flat bracket, the round hole of which coincides with the elongated hole of the crank, and receives the short rod 2. The crank 1 is free to turn about a threaded pin 3, secured to the 3" pulley wheel 4, and once the latter is set in motion it can be kept in rotation by working the treadle 5. The strips 6 of the saddle (Fig. 3.35) are duplicated and their ends form slots to receive the flanges of the angle girders 7. The hand wheel 8 is a dummy one, but if desired it may be arranged to operate the saddle by an endless rope device.

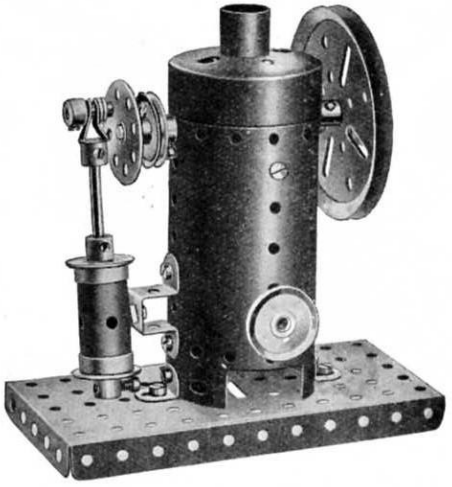
Parts required :

3	of No.	3	2	of No.	16	3	of No.	35	4	of No.	59
10	„ „	5	1	„ „	17	44	„ „	37	1	„ „	62
2	„ „	8	1	„ „	18A	2	„ „	37A	4	„ „	90A
2	„ „	11	2	„ „	19B	4	„ „	38	1	„ „	111c
4	„ „	12	1	„ „	21	1	„ „	46	1	„ „	115
2	„ „	12A	2	„ „	22	2	„ „	48B			
2	„ „	15A	1	„ „	24	3	„ „	53			

Model No. 3.36
Vertical Steam Engine

Parts required :

2	of No.	12	1	of No.	45
1	„ „	16	1	„ „	52
1	„ „	17	1	„ „	59
1	„ „	19B	1	„ „	115
2	„ „	20B	1	„ „	162
3	„ „	22	1	„ „	163
1	„ „	24	1	„ „	164
9	„ „	37	1	„ „	166
2	„ „	38			



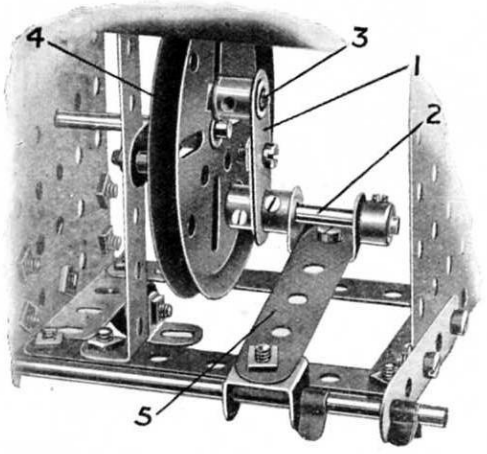
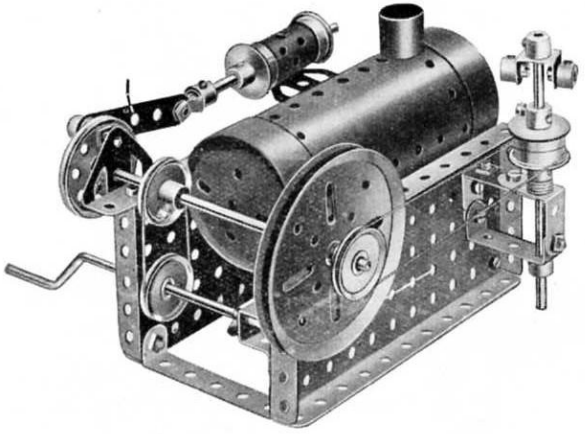


FIG. 3.35A

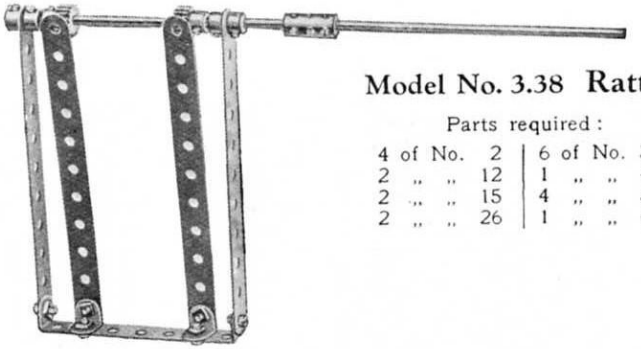
Model No. 3.37 Horizontal Engine

This model forms an interesting example of the use of the Meccano boiler, sleeve piece and other new parts. The 2½" strip 1, forming the connecting rod, is attached to the 1½" pulley wheel by means of a threaded pin. The latter is fastened in one hole of the 1½" pulley wheel, and two washers are placed upon it between the strip 1 and the wheel. The connecting rod is held in place by a collar locked to the end of the threaded pin. The boiler is attached to the framework by means of two 2½" × ½" double angle strips attached by their centre holes to the side of the boiler opposite the chimney. When the boiler is placed in the position shown, the whole is secured by bolting the double angle strips to the side flanged plates.



Parts required :

1	of No.	5	3	of No.	22	1	of No. 115
2	„ „	12A	1	„ „	35	1	„ „ 116
2	„ „	15A	25	„ „	37	2	„ „ 126
1	„ „	16	7	„ „	38	1	„ „ 126A
1	„ „	19B	1	„ „	45	1	„ „ 162
1	„ „	19S	1	„ „	48	1	„ „ 163
4	„ „	20B	4	„ „	48A	1	„ „ 164
1	„ „	21	2	„ „	52	1	„ „ 166
			4	„ „	59		



Model No. 3.38 Rattle

Parts required :

4	of No.	2	6	of No.	37
2	„ „	12	1	„ „	48B
2	„ „	15	4	„ „	59
2	„ „	26	1	„ „	63

Model No. 3.39 Oil Cake Chopper

Parts required :

4	of No.	3	1	of No.	52
6	„ „	10	2	„ „	53
1	„ „	15	2	„ „	54
1	„ „	19B	1	„ „	59
4	„ „	22	2	„ „	90A
24	„ „	37	1	„ „	115
2	„ „	48B	2	„ „	125

Fig. 3.39A, shows the hand wheel and shaft removed from the model. It will be seen that the chopping mechanism is represented by flat brackets clamped between two pairs of 1" fixed pulley wheels.

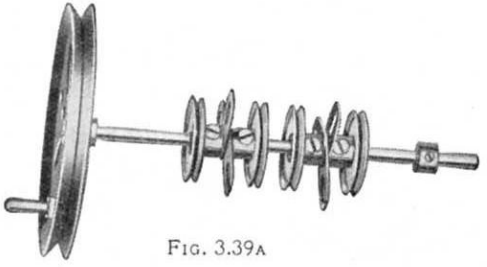


FIG. 3.39A

Model No. 3.40 Railway Wagon Swivel Crane

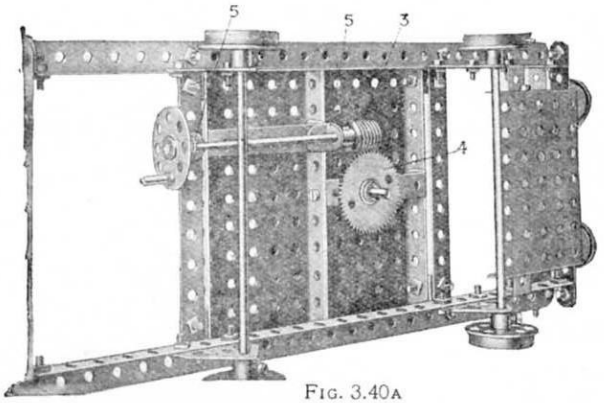


FIG. 3.40A

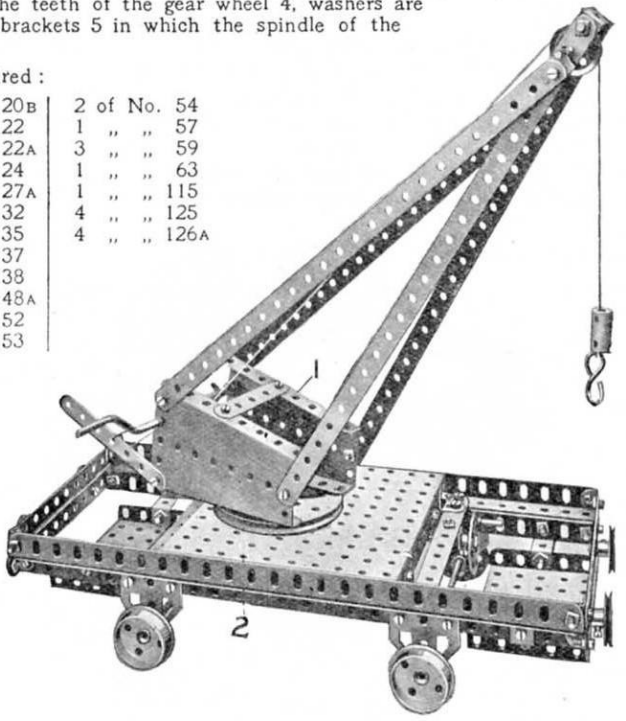
The flanges of the sector plates 1 are bolted to the 3" pulley wheel 2 upon which the crane swivels, and the spindle of the pulley wheel is rotated by the worm 3 engaging the gear wheel 4 (Fig. 3.40A). In order to bring the worm centrally over the teeth of the gear wheel 4, washers are placed beneath the angle brackets 5 in which the spindle of the worm is journalled.

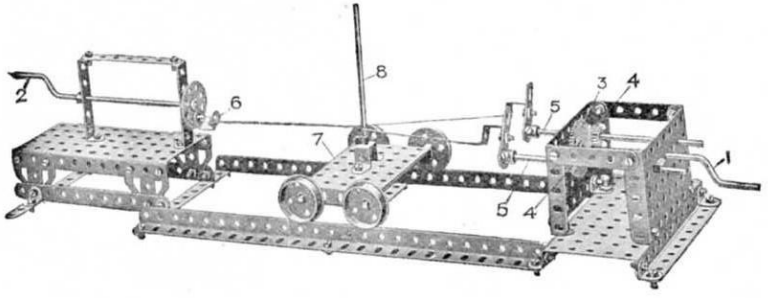
Parts required:

4	of No.	1	4	of No.	20B	2	of No.	54
6	" "	2	4	" "	22	1	" "	57
1	" "	3	1	" "	22A	3	" "	59
2	" "	5	1	" "	24	1	" "	63
4	" "	8	1	" "	27A	1	" "	115
1	" "	11	1	" "	32	4	" "	125
14	" "	12	3	" "	35	4	" "	126A
2	" "	15	70	" "	37			
1	" "	15A	2	" "	38			
2	" "	17	2	" "	48A			
1	" "	19	2	" "	52			
1	" "	19B	2	" "	53			

Model No. 3.41 Wire Rope Maker

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





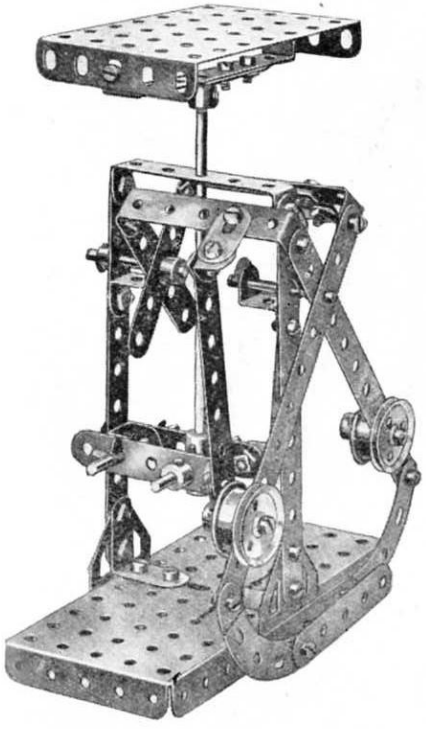
Parts required for Wire Rope Maker:

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

Model No. 3.42 Letter Balance

Parts required :

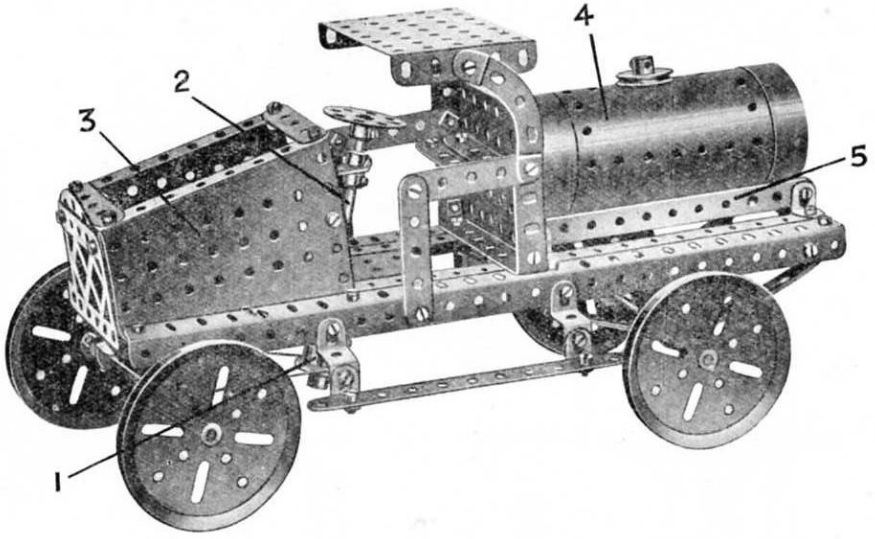
4	of No.	2	2	of No.	18A	1	of No.	53
2	„ „	3	2	„ „	20B	4	„ „	59
5	„ „	5	2	„ „	22A	1	„ „	62
2	„ „	10	4	„ „	35	1	„ „	63
1	„ „	11	37	„ „	37	2	„ „	90A
4	„ „	12	6	„ „	37A	2	„ „	111
2	„ „	12A	2	„ „	48A	4	„ „	111C
1	„ „	15	1	„ „	48B	2	„ „	125
2	„ „	17	1	„ „	52	2	„ „	126A



Model No. 3.43 Tank Lorry

Parts required :

2	of No.	1
8	„ „	2
1	„ „	3
6	„ „	5
1	„ „	6A
2	„ „	8
2	„ „	11
16	„ „	12
2	„ „	12A
2	„ „	15
1	„ „	15A
4	„ „	19B
2	„ „	20B
1	„ „	22
1	„ „	24
4	„ „	35
60	„ „	37
1	„ „	37A
4	„ „	38
1	„ „	48
1	„ „	48A
2	„ „	48B
1	„ „	52
2	„ „	53
2	„ „	54
4	„ „	59
3	„ „	90A
1	„ „	98
2	„ „	111C
4	„ „	125
2	„ „	126
1	„ „	162



It should be noted that the steering cord is given a complete turn around the two $\frac{3}{4}$" flanged wheels 1 to prevent slipping. The steering column 2 is journalled in the end of a $1\frac{1}{2}$" strip, the other end of which is bolted to a $2\frac{1}{2}" \times \frac{1}{2}"$ double angle strip secured between the two sector plates 3. The front road wheels are secured to a 5" rod that is journalled in the end holes of a $3\frac{1}{2}" \times \frac{1}{2}"$ double angle strip. The ends of the steering cord are tied to this strip, which is pivoted by means of a bolt and lock-nuts (S.M. 263) to the central hole of a $1\frac{1}{2}" \times \frac{1}{2}"$ double angle strip. The latter is bolted between a pair of Trunnions attached to the underside of the $5\frac{1}{2}" \times 2\frac{1}{2}"$ flanged plate. The tank 4 merely rests on the $5\frac{1}{2}"$ strips 5.

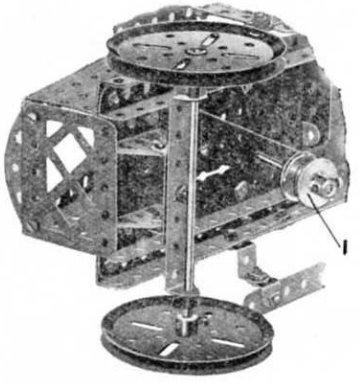
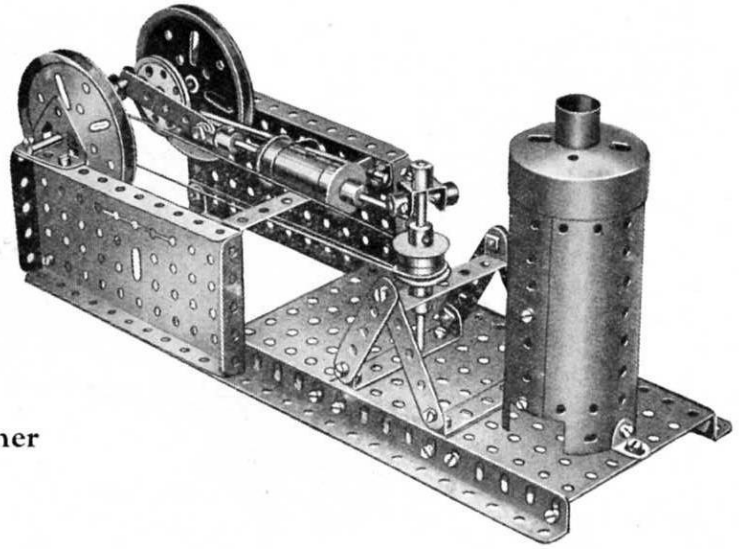


FIG. 3.43A

Model No. 3.44 Horizontal Engine

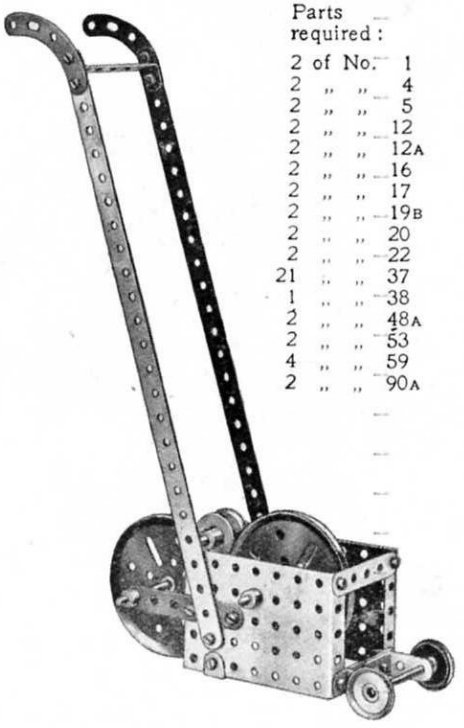
Parts required :

5	of No.	5	30	of No.	37
2	„ „	8	3	„ „	48A
2	„ „	12	2	„ „	48B
3	„ „	15A	2	„ „	52
1	„ „	19S	3	„ „	53
2	„ „	19B	3	„ „	59
4	„ „	20B	1	„ „	116
1	„ „	21	2	„ „	126
1	„ „	22	1	„ „	162
2	„ „	35	1	„ „	163
	1 of No. 165				



Model No. 3.45 Lawn Marker

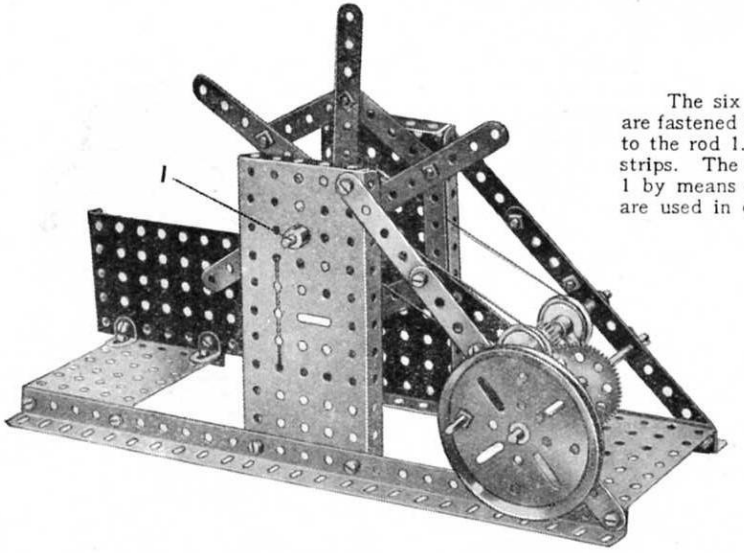
The small roller, which consists of two ¾" flanged wheels secured to a short rod, rest on the edges of the two 3" pulley wheels. In actual practice the container is filled with whitewash, in which the inner wheel is partially immersed, and the mixture is transferred via the roller to the outer wheel, which does the actual marking.



Parts required :

2	of No.	1
2	„ „	4
2	„ „	5
2	„ „	12
2	„ „	12A
2	„ „	16
2	„ „	17
2	„ „	19B
2	„ „	20
2	„ „	22
21	„ „	37
1	„ „	38
2	„ „	48A
2	„ „	53
4	„ „	59
2	„ „	90A

Model No. 3.46 Flax Cleaner

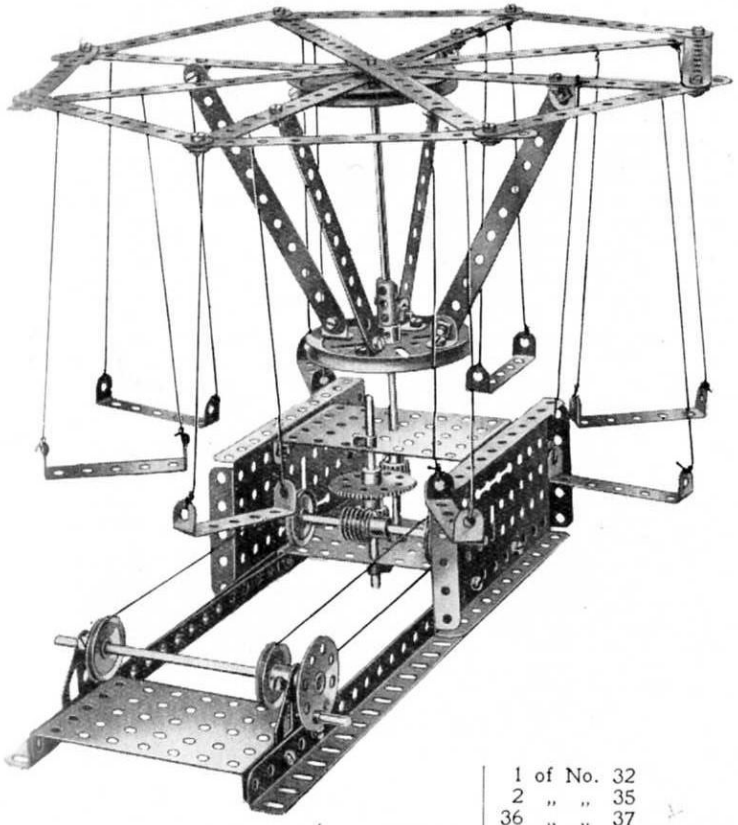


The six 3½" strips forming the rotating frame are fastened to a bush wheel that in turn is attached to the rod 1. The 3½" strips are braced by six 2½" strips. The drive is transmitted from rod 2 to rod 1 by means of endless cords. Two separate cords are used in order to secure a more positive drive.

Parts required :

4	of No.	2	1	of No.	26
6	„ „	3	1	„ „	27A
6	„ „	5	1	„ „	35
2	„ „	8	34	„ „	37
2	„ „	12	3	„ „	38
3	„ „	15A	2	„ „	52
1	„ „	19B	3	„ „	53
4	„ „	22	4	„ „	59
1	„ „	24	1	„ „	115

Model No. 3.47 Roundabout

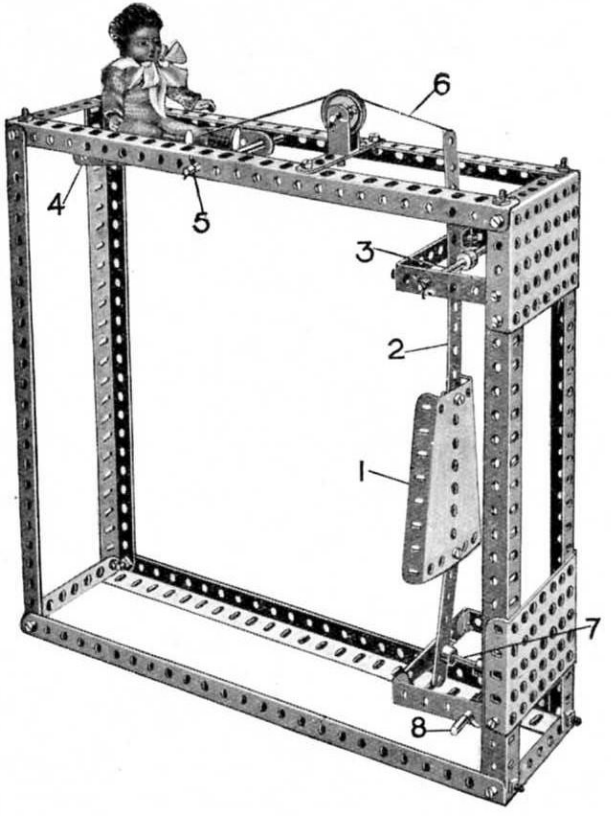


Parts required :

4 of No.	1	2 of No.	8	1 of No.	16	1 of No.	32
12 „ „	2	8 „ „	12	2 „ „	19B	2 „ „	35
		1 „ „	15	4 „ „	22	36 „ „	37
		3 „ „	15A	1 „ „	24	8 „ „	48A
				2 „ „	26	2 „ „	52
				1 „ „	27A	3 „ „	53
						2 „ „	59
						1 „ „	115
						2 „ „	126A

Model No. 3.48 Drop the Nigger

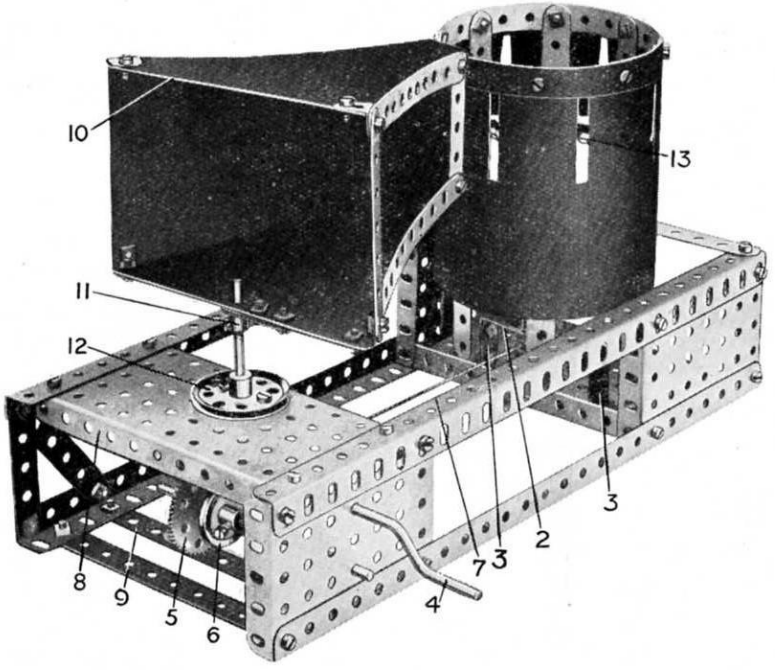
The sector plate 1 is a target, which, when hit, allows the nigger to be dropped. The plate 1 is carried on the strip 2 pivoted at 3, and the weight of the nigger supported on another sector plate 4 pivoted at 5 by means of the cord 6 keeps the lower end of the strip 2 hard against a short rod 7 pivoted at 8. When the target is hit and knocked back the rod 7 is released and falls about its pivot, allowing the sector plate 4 with the nigger to drop.



Parts required :

1 of No.	1	1 of No.	32
6 „ „	3	2 „ „	35
8 „ „	8	36 „ „	37
1 „ „	12	8 „ „	48A
3 „ „	15A	2 „ „	52
2 „ „	17	3 „ „	53
1 „ „	22	2 „ „	59
6 „ „	35	1 „ „	115
33 „ „	37	2 „ „	126A
1 „ „	44		
4 „ „	48A		
2 „ „	53		
2 „ „	54		
3 „ „	59		
1 „ „	63		

Model No. 3.49 Kinetograph



Most Meccano boys probably are aware of the principles of the Kinetograph, but for the benefit of those who have not seen one in action, we may mention that it is a device which imparts an appearance of animation to a series of pictures, each differing slightly from the other and passed in rapid succession before the eyes. In this respect it resembles the remarkable principle upon which the modern cinematograph is based.

In constructing the Meccano model the following details will prove useful :—The drum consists of a 12½" strip bent to form a circle, with its ends overlapping one hole, and bolted to eight vertical 5½" strips forming the sides. Two pairs of opposite 5½" strips are connected by 3½" strips and angle brackets bolted in the third holes from their lower ends. The 3½" strips cross at right angles to one another and are bolted in the centre to a bush wheel, in the boss of which is secured a short rod forming the pivot of the revolving drum. This rod is journalled in a double bent strip bolted to a 2½" × 1" double angle strip 2. This, in turn, is secured to the base of the model by two 1" × 1" angle brackets 3. A further bearing for the short rod consists of a crank bolted in the base of the model.

The drum is rotated from the crank handle 4, on which is mounted a ½" pinion engaging a 57-teeth gear wheel 5 secured to a 3½" rod carrying a pulley wheel 6. The latter is connected by means of a cord 7 to a similar wheel nipped to the vertical spindle of the drum. Bearings are provided for the inner ends of the crank handle and 3½" rod by a double angle strip bolted between the plate 8 and 5½" strip 9. The sighting box 10 is built up from a framework of strips and is secured by means of a crank 11 to a short vertical rod rigidly mounted in the boss of the 1½" pulley 12. The four sides of the framework 10 are covered with some black material ; stiff black paper suitable for this purpose may be obtained from any stationers. The drum is enclosed in the same way, but the covering paper should be cut in a strip measuring 12½" × 4½" and pierced with slots spaced 1½" apart (from centre to centre) so that they fall exactly between the upright 5½" strips. The slots should measure 1½" × ½".

The type of drawing suitable for use in this model is shown in Fig. 3.49A, and the dimensions indicated therein should be followed carefully. No doubt Meccano boys will be able to devise numerous amusing pictures of a similar kind for themselves. The strip of stout white paper carrying the sketches is inserted in the bottom of the drum, as indicated at 13. The model is now ready for operation. Placing the frame 10 over the eyes, the line of vision is directed through the narrow end, where the strips are held apart by means of double brackets, and through the slots in the drum. The latter should be rotated rapidly by operating the handle 4, and as it revolves, the little dog shown in Fig. 3.49A will be seen jumping over the fence with a most realistic and amusing action.

Parts required :

1	of No.	1	1	of No.	15A	12	of No.	38
17	„ „	2	2	„ „	16	1	„ „	45
6	„ „	3	1	„ „	19S	1	„ „	46
1	„ „	4	1	„ „	21	1	„ „	48A
3	„ „	5	2	„ „	22	2	„ „	52
4	„ „	8	1	„ „	24	3	„ „	53
2	„ „	11	1	„ „	26	4	„ „	59
12	„ „	12	1	„ „	27A	2	„ „	62
2	„ „	12A	60	„ „	37			

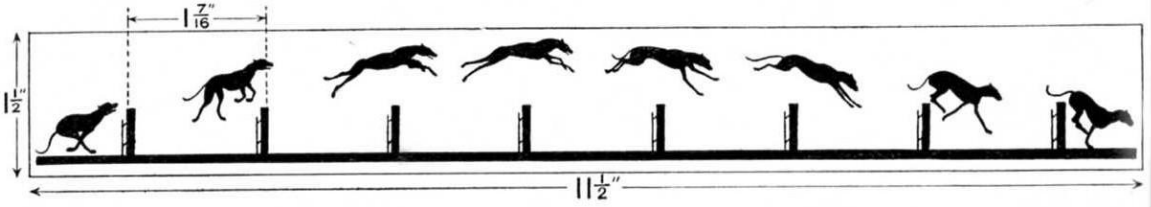
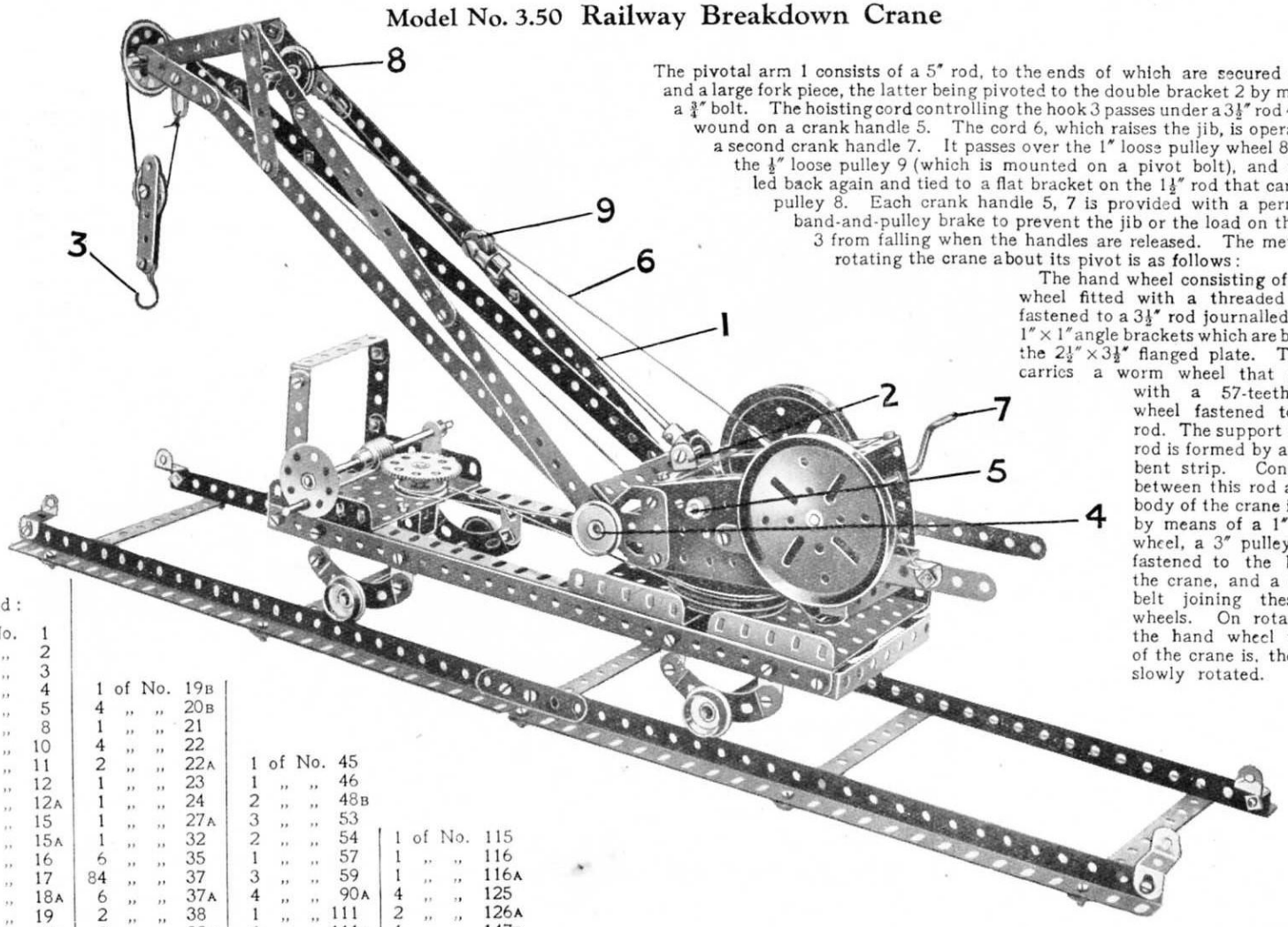


FIG. 3.49A

Model No. 3.50 Railway Breakdown Crane



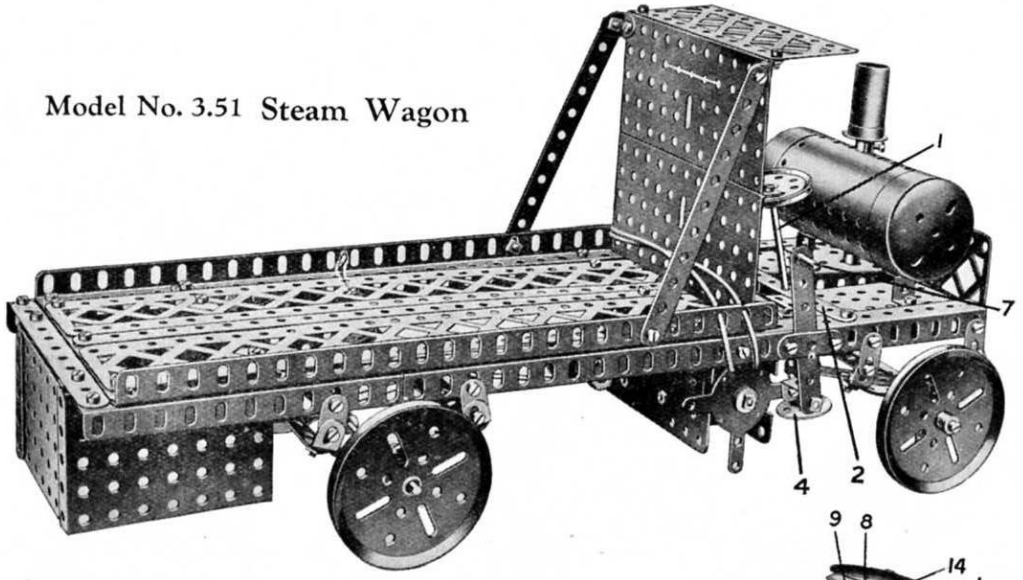
The pivotal arm 1 consists of a 5" rod, to the ends of which are secured a small and a large fork piece, the latter being pivoted to the double bracket 2 by means of a ¾" bolt. The hoisting cord controlling the hook 3 passes under a 3½" rod 4 and is wound on a crank handle 5. The cord 6, which raises the jib, is operated by a second crank handle 7. It passes over the 1" loose pulley wheel 8, round the ½" loose pulley 9 (which is mounted on a pivot bolt), and is then led back again and tied to a flat bracket on the 1½" rod that carries the pulley 8. Each crank handle 5, 7 is provided with a permanent band-and-pulley brake to prevent the jib or the load on the hook 3 from falling when the handles are released. The method of rotating the crane about its pivot is as follows:

The hand wheel consisting of a bush wheel fitted with a threaded pin is fastened to a 3½" rod journalled in two 1" × 1" angle brackets which are bolted to the 2½" × 3½" flanged plate. This rod carries a worm wheel that meshes with a 57-teeth gear wheel fastened to a 2" rod. The support for this rod is formed by a double bent strip. Connection between this rod and the body of the crane is made by means of a 1" pulley wheel, a 3" pulley wheel fastened to the base of the crane, and a crossed belt joining these two wheels. On rotation of the hand wheel the jib of the crane is, therefore, slowly rotated.

Parts required:

2	of No.	1									
11	„ „	2									
2	„ „	3									
2	„ „	4	1	of No.	19B						
12	„ „	5	4	„ „	20B						
6	„ „	8	1	„ „	21						
10	„ „	10	4	„ „	22						
2	„ „	11	2	„ „	22A	1	of No.	45			
3	„ „	12	1	„ „	23	1	„ „	46			
2	„ „	12A	1	„ „	24	2	„ „	48B			
1	„ „	15	1	„ „	27A	3	„ „	53			
3	„ „	15A	1	„ „	32	2	„ „	54	1	of No.	115
1	„ „	16	6	„ „	35	1	„ „	57	1	„ „	116
2	„ „	17	84	„ „	37	3	„ „	59	1	„ „	116A
2	„ „	18A	6	„ „	37A	4	„ „	90A	4	„ „	125
1	„ „	19	2	„ „	38	1	„ „	111	2	„ „	126A
1	„ „	19S	3	„ „	38A	6	„ „	111C	1	„ „	147B

Model No. 3.51 Steam Wagon



Parts required :

14	of No.	2	4	of No.	19B	2	of No.	54
6	„ „	3	3	„ „	20B	4	„ „	59
6	„ „	5	1	„ „	21	2	„ „	62
2	„ „	6A	4	„ „	22	1	„ „	63
6	„ „	8	1	„ „	23	2	„ „	99
8	„ „	10	1	„ „	24	2	„ „	100
3	„ „	11	1	„ „	26	2	„ „	111
10	„ „	12	79	„ „	37	1	„ „	115
2	„ „	12A	10	„ „	38	4	„ „	125
1	„ „	15	2	„ „	48B	1	„ „	147B
3	„ „	16	2	„ „	52	1	„ „	162
2	„ „	18A	3	„ „	53	1	„ „	163

Electric Motor
(not included in Outfit)

The steering column 1 is journalled in bearings consisting of a 5½" strip 2 and two 2½" strips 3 (Fig. 3.51A), and carries the bush wheel 4, which is secured rigidly to it. A ¾" flanged wheel 5 supports the weight of the steering column 1. The stub axles of the front road wheels consist of ¾" bolts, on which the road wheels are spaced by washers 14. These bolts serve in the place of set-screws to secure two collars to the 1" rods 8. A pair of cranks 9, 9a secured to the rods 8 are joined by two 5½" strips 15 overlapped eight holes. A 1½" strip 10, bolted to the face of the bush wheel 4, is connected pivotally by a composite 4½" strip 11 (a 3½" strip and a 2½" strip overlapped three holes) to the end of the crank 9. When the steering wheel is turned, the strip 11 moves the cranks 9, 9a, thereby deflecting the front road wheels.

The electric motor 6 is controlled by raising and depressing the handle 7. Duplicate drive transmission belts 12 and 13 are used in order to secure a more dependable drive to the rear axle.

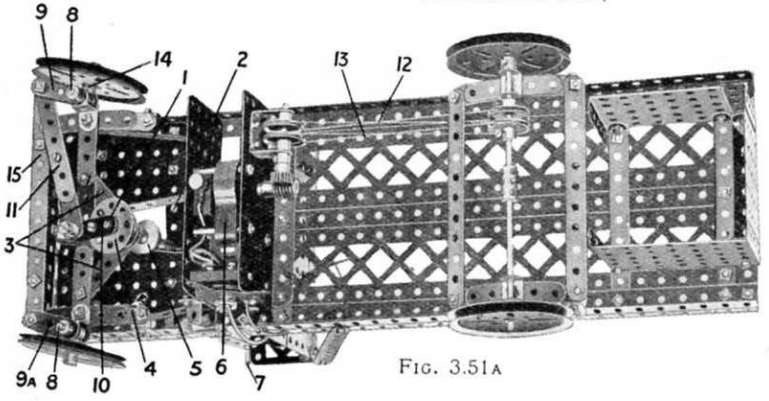
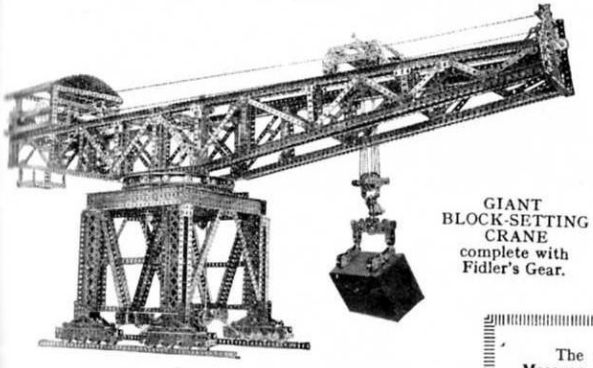


FIG. 3.51A

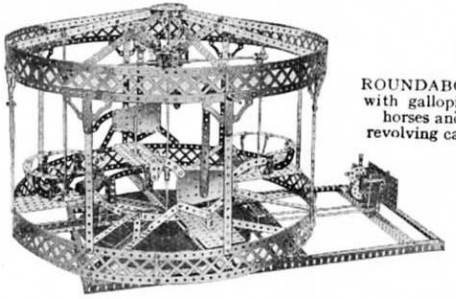
HOW TO CONTINUE

This completes our examples of models that may be made with MECCANO Outfit No. 3. The next models are a little more advanced, requiring a number of extra parts to construct them. The necessary parts are all contained in a No. 3A Accessory Outfit, the price of which will be found in the List at the end of this Manual.

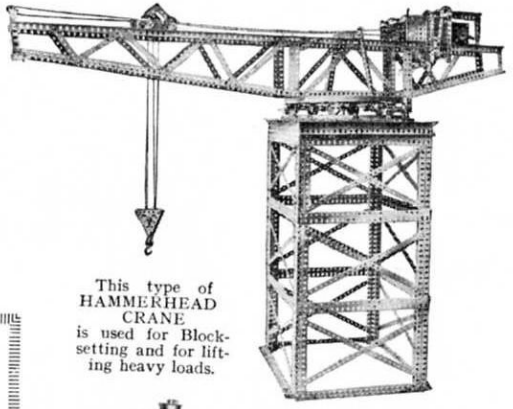
A Selection of Choice Meccano Models



GIANT BLOCK-SETTING CRANE complete with Fidler's Gear.



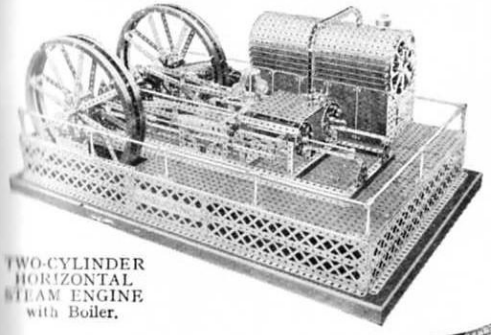
ROUNDABOUT with galloping horses and revolving cars.



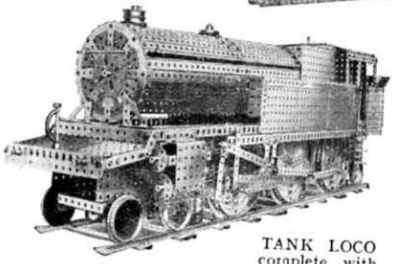
This type of HAMMERHEAD CRANE is used for Block-setting and for lifting heavy loads.

The models illustrated on this page show the wonderful possibilities of Meccano. They comprise a selection from a range of super models that have been specially built for the delight of Meccano boys.

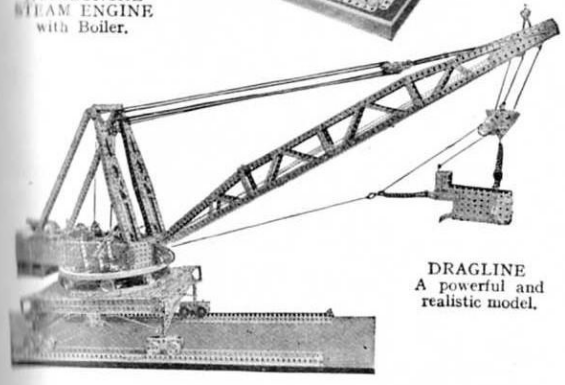
A descriptive leaflet giving full particulars of all the models in the series and the prices of the special Instruction Leaflets that are published in connection with them, may be obtained from your dealer or direct from Meccano Ltd., Binns Road, Liverpool.



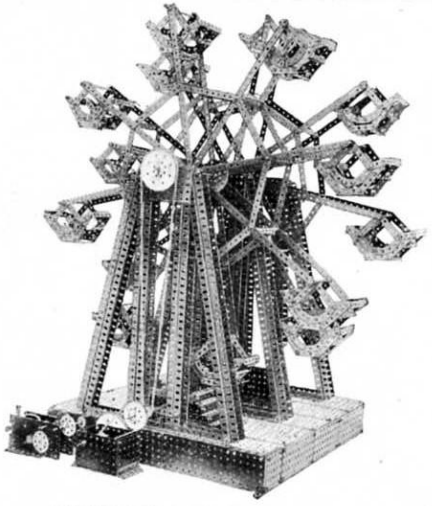
TWO-CYLINDER HORIZONTAL STEAM ENGINE with Boiler.



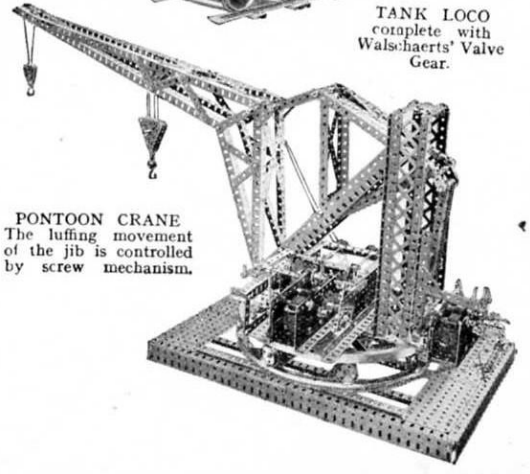
TANK LOCO complete with Walschaerts' Valve Gear.



DRAGLINE A powerful and realistic model.



DOUBLE FLYBOATS This is a most impressive model when in motion.



PONTOON CRANE The luffing movement of the jib is controlled by screw mechanism.

A Selection of Meccano Standard Mechanisms

Here are a few simple and interesting movements showing how easily real mechanisms can be reproduced with Meccano. They are a selection from the Meccano Standard Mechanisms Manual, which is fully described on page 2 of this Manual.

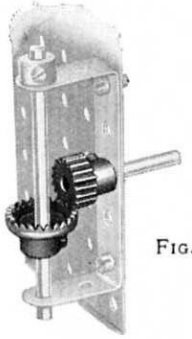


FIG. A

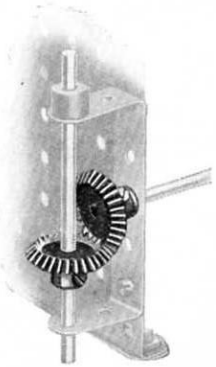


FIG. C

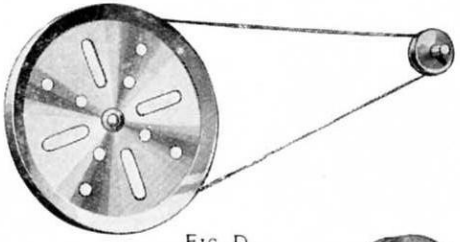


FIG. D

FIG. G

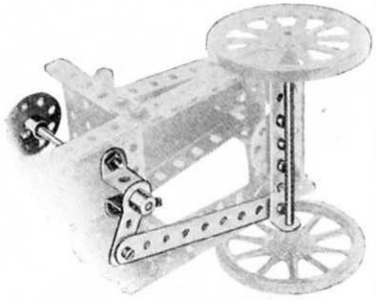


FIG. H

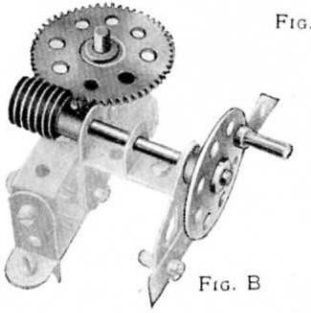


FIG. B

FIG. E

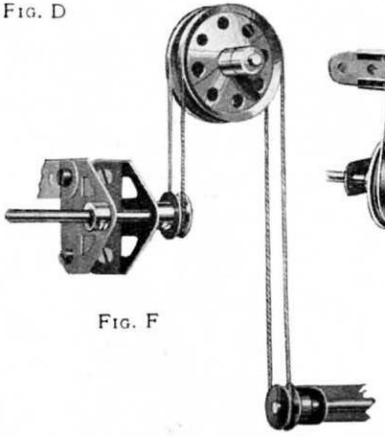


FIG. F

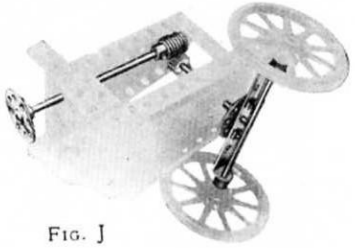


FIG. J

Gears

The Meccano system includes a wide range of Gear Wheels, Bevel Gears, Pinion Wheels, Contrate Wheels and Worm Wheels in various sizes. All manner of interesting movements may be obtained by the use of these gears.

Fig. A shows how a drive may be transmitted from a vertical to a horizontal shaft or vice versa. Fig. B shows a Worm engaged with a Gear Wheel, giving a very great reduction in shaft speed. Fig. C illustrates another right angle drive, obtained by using Meccano Bevel Gears.

Belt and Chain Drives

In Figs. D, E, F and G we show examples of belt and chain drives. The movements illustrated require no explanation excepting, perhaps, Fig. G, which shows a simple method for slipping the belt from the fast to the loose pulleys or vice versa.

Cords usually take the place of belts in Meccano models but miniature belting may be made from strips of canvas, indiarubber, etc., in which case Flanged Wheels should be used instead of grooved Pulleys.

Steering Gears

The various types of steering mechanism commonly in use on vehicles of all descriptions may readily be reproduced with Meccano.

Fig. H. In this case the road wheels are moved about their central pivot by means of a crank, which is secured to the steering shaft, and a connecting strip.

Fig. J. The road wheels in this example are secured to a central rod, which forms a pivot, and is rotated from the hand-wheel by means of a worm gear.

A Selection of Meccano Standard Mechanisms

(continued)

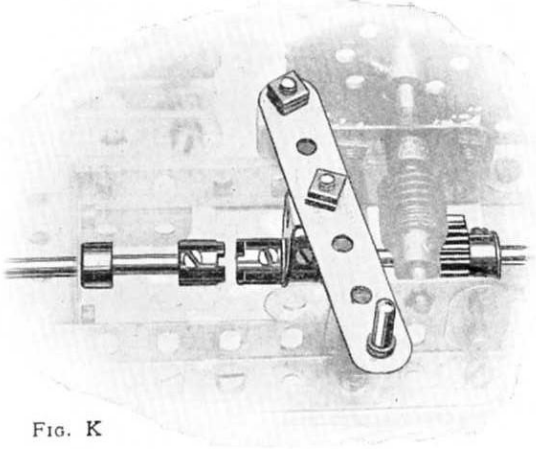


FIG. K

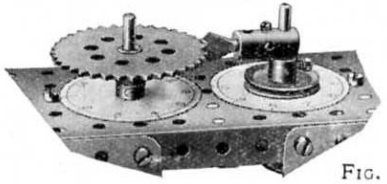


FIG. L

Dog Clutch

The Meccano Dog Clutch (Fig. K) may be used in most models where a simple clutch is required. It is also useful in the construction of drive-changing and reversing mechanisms, etc. Various kinds of clutches, in addition to the Dog Clutch, may be constructed from the standard Meccano parts.

Intermittent Rotary Motion

Fig. L shows one device by means of which intermittent rotary motion may be obtained. Such an arrangement is useful in revolution counters, measuring machines, etc. In addition to mechanisms that give true intermittent motion, different types of cams, converting a regular rotary motion into a constant or intermittent reciprocating motion, are described in the S.M. Manual.

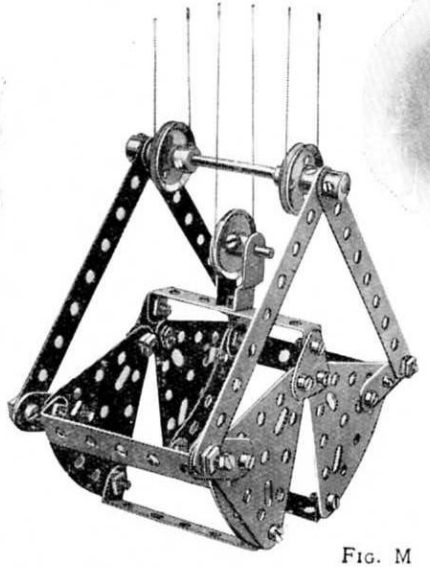


FIG. M

Grabs

A typical example of the many kinds of grab that can be constructed from Meccano is shown in Fig. M. If the grab is fitted to a model crane or ship-coaler, all the movements can be controlled from an operating box built into the frame of the model. The outer sides of the jaws may be filled in with cardboard and the grab can then be used to pick up loads of sand, grain, marbles, etc.

Pawl and Ratchet Wheel

Fig. N illustrates the standard Meccano Pawl and Ratchet Wheel gear, which allows the shaft carrying the Ratchet Wheel to rotate in one direction only. The advantages of such an arrangement are obvious, especially when attached to model Cranes, hoisting-tackle, etc., where the Pawl and Ratchet gear prevents falling-back of the load as it is hoisted.

FIG. N

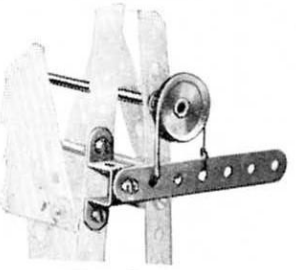


FIG. O

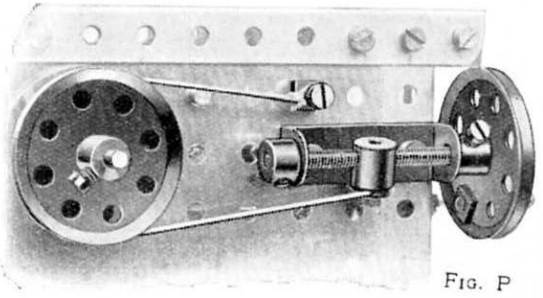


FIG. P

Strap and Lever Brake

This device (Fig. O) will be found very useful as a quick emergency hand-brake. Although it is the most simple of such devices, it is also one of the most valuable.

Strap and Screw Brake

The type of brake shown in Fig. P is used to apply a constant retarding effect to a rotating shaft. It can thus be utilized in a crane to prevent the load from falling back when the winding spindle is released. One advantage of the brake is that the speed of the shaft to which it is applied can be infinitely varied, so that in some models it will take the place of a gear-changing mechanism.

CONTENTS OF OUTFITS

No.	Description of Part.	00	00A	0	0A	1	1A	2	2A	3	3A	4	4A	5	5A	6	6A	7
1	Perforated Strips, 12½"	—	—	—	4	4	6	10	—	10	2	12	4	16	32	48	2	50
1A	" " 9½"	—	—	—	—	—	—	—	—	—	—	—	—	—	2	2	10	12
1B	" " 7½"	—	—	—	—	—	—	—	—	—	—	—	—	—	4	4	—	4
2	" " 5½"	4	—	4	4	8	6	14	4	18	3	21	5	26	24	50	25	75
2A	" " 4½"	—	—	—	—	—	—	—	—	—	2	2	2	4	—	4	8	12
3	" " 3½"	—	—	—	1	1	1	2	4	6	—	6	6	12	12	24	—	24
4	" " 3"	—	—	—	—	—	—	—	2	2	4	6	2	8	4	12	24	36
5	" " 2½"	6	3	9	—	9	3	12	—	12	6	18	18	36	—	36	84	120
6	" " 2"	—	—	—	—	—	—	—	—	—	—	—	4	4	20	24	12	36
6A	" " 1½"	—	—	—	—	—	2	2	—	2	—	2	4	6	8	14	—	14
7	Angle Girders, 24½"	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	12	12
7A	" " 18½"	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6	6
8	" " 12½"	—	—	—	—	—	4	4	4	8	1	9	5	14	12	26	—	26
8A	" " 9½"	—	—	—	—	—	—	—	—	—	—	—	4	4	2	6	6	12
8B	" " 7½"	—	—	—	—	—	—	—	—	—	—	—	—	—	2	2	2	4
9	" " 5½"	—	—	—	—	—	—	—	—	—	4	4	—	4	14	18	6	24
9A	" " 4½"	—	—	—	—	—	—	—	—	—	—	—	—	—	2	2	6	8
9B	" " 3½"	—	—	—	—	—	—	—	—	—	—	—	—	—	2	2	5	7
9C	" " 3"	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3	3
9D	" " 2½"	—	—	—	—	—	—	—	—	—	—	—	1	1	5	6	—	6
9E	" " 2"	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2	2
9F	" " 1½"	—	—	—	—	—	—	—	—	—	—	—	—	—	4	4	—	4
10	Flat Brackets	4	—	4	1	5	3	8	—	8	1	9	3	12	4	16	8	24
11	Double Brackets	—	2	2	—	2	2	4	—	4	1	5	3	8	—	8	4	12
12	Angle Brackets, ½"×½"	8	—	8	—	8	4	12	2	14	8	22	14	36	12	48	48	96
12A	" " 1"×1"	—	—	—	—	—	2	2	2	4	2	6	—	6	—	6	6	12
12B	" " 1"×½"	—	—	—	—	—	—	—	—	—	—	—	—	—	4	4	4	8
13	Axle Rods, 11½"	—	—	—	—	—	—	—	—	—	2	2	—	2	1	3	1	4
13A	" " 8"	—	—	—	—	—	—	—	—	—	1	1	—	1	3	4	9	13
14	" " 6½"	—	—	—	—	—	—	—	—	—	3	3	—	3	3	6	7	13
15	" " 5"	—	—	—	—	—	2	2	—	2	2	4	—	4	—	4	2	6
15A	" " 4½"	—	—	—	—	—	1	1	2	3	2	5	—	5	1	6	—	6
16	" " 3½"	2	—	2	1	3	1	4	—	4	1	5	—	5	2	7	5	12
16A	" " 2½"	—	—	—	—	—	—	—	—	—	—	—	—	—	4	4	—	4
16B	" " 3"	—	—	—	—	—	—	—	—	—	—	—	—	—	2	2	—	2
17	" " 2"	2	—	2	—	2	—	2	—	2	3	5	—	5	4	9	3	12
18A	" " 1½"	—	—	—	2	2	2	4	—	4	—	4	—	4	—	4	5	9
18B	" " 1"	—	—	—	—	—	—	—	—	—	—	—	—	—	2	2	5	7
19	Crank Handles (5" shaft)	—	—	—	—	—	1	1	—	1	—	1	—	1	2	3	—	3
19S	" (3½" shaft)	1	—	1	—	1	—	1	—	1	—	1	—	1	—	1	—	1
19A	Wheels, 3"	—	—	—	—	—	—	—	—	—	—	—	4	4	—	4	—	4
19B	Pulley Wheels, 3"	—	—	—	4	4	—	4	—	4	—	4	—	4	—	4	—	4
20	Flanged Wheels, 1¼"	—	—	—	—	—	—	—	—	—	—	—	8	8	—	8	4	12
20A	Pulley Wheels, 2"	—	—	—	—	—	—	—	—	—	—	—	—	—	1	1	5	6
20B	Flanged Wheels, ¾"	—	—	—	—	—	4	4	—	4	4	8	—	8	—	8	2	10
21	Pulley Wheels, 1½"	—	—	—	—	—	—	—	1	1	—	1	1	2	—	2	2	4
22	" " 1" (fast)	4	—	4	—	4	—	4	—	4	—	4	—	4	2	6	4	10
22A	" " 1" (loose)	—	—	—	—	—	2	2	—	2	1	3	—	3	1	4	11	15
23	" " ½" (loose)	—	1	1	—	1	—	1	—	1	2	3	—	3	1	4	6	10
23A	" " ½" (fast)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4	4
24	Bush Wheels	1	—	1	—	1	—	1	—	1	1	2	—	2	3	5	—	5
25	Pinion Wheels, ¾"	—	—	—	—	—	—	—	2	2	—	2	1	3	2	5	3	5
26	" ½"	—	—	—	—	—	—	—	—	—	—	—	—	—	2	2	4	9
27	Gear Wheels, 50-teeth	—	—	—	—	—	—	—	—	—	—	—	—	—	2	2	3	5
27A	" " 57-teeth	—	—	—	—	—	—	—	1	1	1	2	—	2	1	3	5	8
27B	" " 133-teeth (3½" diam.)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	1
28	Contrate Wheels, 1½"	—	—	—	—	—	—	—	—	—	1	1	—	1	1	2	1	3
29	" ¾"	—	—	—	—	—	—	—	—	—	2	2	—	2	—	2	2	4
30	Bevel Gears, ½"	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4	4
30A	" " ¾"	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2	2
30C	" " 1½"	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2	2
31	Gear Wheels, 1", 38 teeth	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4	4
32	Worm Wheels	—	—	—	—	—	—	—	1	1	—	1	—	1	1	2	—	2
34	Spanners	—	1	1	—	1	—	1	—	1	1	2	—	2	—	2	—	2
35	Spring Clips	4	2	6	2	8	6	14	—	14	5	19	—	19	5	24	12	36
36	Screw Drivers	1	—	1	—	1	—	1	—	1	—	1	—	1	—	1	—	1
36B	" (special)	—	—	—	—	—	—	—	—	—	1	1	—	1	—	1	—	1
37	Nuts and Bolts, 7/32"	16	—	16	20	36	24	60	34	94	32	126	43	169	145	314	280	594
37A	Nuts	4	2	6	—	6	—	6	—	6	—	6	—	6	—	6	—	6
38	Washers	—	—	—	8	8	6	14	—	14	10	24	—	24	12	36	164	200
40	Hanks of Cord	1	—	1	—	1	1	2	1	3	1	4	2	6	—	6	—	6
41	Propeller Blades	—	—	—	—	—	—	—	—	—	—	—	2	2	2	4	—	4
43	Springs	—	—	—	—	—	—	—	1	1	—	1	—	1	1	2	13	15
44	Cranked Bent Strips	1	—	1	—	1	—	1	—	1	—	1	—	1	1	2	1	3
45	Double Bent Strips	—	—	—	—	—	1	1	1	2	1	3	—	3	3	6	—	6
46	Double Angle Strips, 2½"×1"	—	—	—	—	—	—	—	1	1	1	2	2	4	—	4	—	4
47	" " " 2½"×1¼"	—	—	—	—	—	—	—	—	—	—	—	1	1	1	2	—	2
47A	" " " 3"×1½"	—	—	—	—	—	—	—	—	—	—	—	2	2	—	2	—	2
48	" " " 1½"×½"	—	—	—	1	1	—	1	1	2	—	2	—	2	2	4	4	8
48A	" " " 2½"×½"	2	—	2	4	6	2	8	2	10	—	10	—	10	4	14	4	18
48B	" " " 3½"×½"	—	—	—	—	—	—	—	2	2	4	6	—	6	1	7	5	12
48C	" " " 4½"×½"	—	—	—	—	—	—	—	—	—	—	—	—	—	3	3	1	4
48D	" " " 5½"×½"	—	—	—	—	—	—	—	—	—	2	2	2	4	—	4	1	5
50A	Eye Piece, with boss	—	—	—	—	—	—	—	—	—	—	—	1	1	1	2	—	2
52	Perforated Flanged Plates, 5½"×2½"	1	—	1	—	1	—	1	1	2	—	2	2	4	3	7	—	7
52A	Flat Plates, 5½"×3½"	—	—	—	—	—	—	—	—	—	—	—	2	2	2	2	6	8
53	Perforated Flanged Plates, 3½"×2½"	—	—	—	—	—	—	—	3	3	2	5	—	5	3	8	2	10
53A	Flat Plates, 4½"×2½"	—	—	—	—	—	—	—	—	—	—	—	—	—	1	1	2	3
54	Perforated Flanged Sector Plates	—	—	—	2	2	—	2	—	2	1	3	—	3	1	4	—	4
55A	Perforated Strip, slotted, 2"	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	1
	00 Instruction Folders	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
56B	0 " Manuals	—	1	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—
56A	00–3 " "	—	—	—	1	1	—	1	—	1	—	1	—	1	—	1	—	1
56	4–7 " "	—	—	—	—	—	—	—	—	—	1	1	—	1	—	1	—	1
56C	Meccano Standard Mechanisms Manuals	—	—	—	—	—	—	—	—	—	—	—	1	1	—	1	—	1
57	Hooks	1	—	1	—	1	—	1	—	1	—	1	1	2	4	6	11	17
57A	" (Scientific)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6	6
57B	" (Loaded)	—	—	—	—	—	—	—	—	—	—	—	—	—	1	1	1	2
58	Spring Cord, 40" length	—	—	—	—	—	—	—	—	—	—	—	—	—	1	1	—	1

No.	Description of Part.	00	00A	0	0A	1	1A	2	2A	3	3A	4	4A	5	5A	6	6A	7
59	Collars with Set Screws	—	—	—	—	—	—	—	4	4	6	10	3	13	10	23	32	55
61	Windmill Sails	—	—	—	—	—	—	—	—	—	4	4	—	4	—	4	—	4
62	Cranks	—	—	—	—	—	2	2	—	2	—	2	—	2	2	4	11	15
62A	Threaded Cranks	—	—	—	—	—	—	—	—	—	—	—	—	—	2	2	—	2
63	Couplings	—	—	—	—	—	—	—	1	1	5	6	—	6	3	9	4	13
63B	Strip Couplings	—	—	—	—	—	—	—	—	—	—	—	—	—	2	2	—	2
64	Threaded Bosses	—	—	—	—	—	—	—	—	—	—	—	—	—	3	3	5	8
65	Centre Forks	—	—	—	—	—	—	—	—	—	1	1	—	1	1	2	4	6
66	Weights, 50 Gramme	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5	5
67	" 25 "	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5	5
70	Flat Plates, 5½" × 2½"	—	—	—	—	—	—	—	—	—	—	—	1	1	5	6	—	6
72	" " 2½" × 2½"	—	—	—	—	—	—	—	—	—	—	—	—	—	2	2	2	4
76	Triangular Plates, 2½"	—	—	—	—	—	—	—	—	—	—	—	—	—	2	2	6	8
77	" 1"	—	—	—	—	—	—	—	—	—	2	2	—	2	2	4	6	10
78	Screwed Rods, 11½"	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2	2
80	" " 5"	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2	2
80A	" " 3½"	—	—	—	—	—	—	—	—	—	1	1	—	1	1	2	—	2
80B	" " 4½"	—	—	—	—	—	—	—	—	—	—	—	—	—	2	2	—	2
81	" " 2"	—	—	—	—	—	—	—	—	—	—	—	—	—	1	1	1	2
82	" " 1"	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4	4
89	Curved Strips, 5½"	—	—	—	—	—	—	—	—	—	—	—	4	4	2	6	—	6
90	" " 2½", large radius	—	—	—	—	—	—	—	2	2	2	4	2	6	10	16	—	16
90A	" " 2½", small "	2	2	4	—	4	—	4	—	4	—	4	—	4	—	4	2	6
94	Sprocket Chain	—	—	—	—	—	—	—	—	—	40"	40"	—	40"	5'	8'	12'	20'
95	Sprocket Wheels, 2"	—	—	—	—	—	—	—	—	—	2	2	—	2	1	3	—	3
95A	" " 1½"	—	—	—	—	—	—	—	—	—	—	—	—	—	1	1	3	4
95B	" " 3"	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2	2
96	" " 1"	—	—	—	—	—	—	—	—	—	2	2	—	2	2	4	6	10
96A	" " ¾"	—	—	—	—	—	—	—	—	—	—	—	—	—	3	3	—	3
97	Braced Girders, 3½"	—	—	—	—	—	—	—	—	—	—	—	—	—	4	4	1	5
98	" " 2½"	—	—	—	—	—	—	—	1	1	—	1	—	1	7	8	—	8
99	" " 12½"	—	—	—	—	2	2	—	2	2	2	4	—	4	4	8	10	18
99A	" " 9½"	—	—	—	—	—	—	—	—	—	—	—	—	—	2	2	—	2
100	" " 5½"	—	—	—	2	2	—	2	—	2	4	6	1	7	1	8	8	16
101	Healds for Looms	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	48	48
102	Single Bent Strips	—	—	—	—	—	—	—	—	—	—	—	2	2	—	2	2	4
103	Flat Girders, 5½"	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6	6
103A	" " 9½"	—	—	—	—	—	—	—	—	—	—	—	—	—	2	2	2	4
103B	" " 12½"	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2	2
103D	" " 3½"	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5	5
103E	" " 3"	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	1
103F	" " 2½"	—	—	—	—	—	—	—	—	—	2	2	—	2	—	2	—	2
103H	" " 1½"	—	—	—	—	—	—	—	—	—	—	—	—	—	1	1	2	3
103K	" " 7½"	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2	2
104	Shuttles for Looms	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	1
105	Reed Hooks	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	1
106	Wood Rollers	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2	2
106A	Sand Rollers	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	1
107	Designing Tables	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	1
108	Architraves	—	—	—	—	—	—	—	—	—	2	2	—	2	2	4	4	8
109	Face Plates, 2½"	—	—	—	—	—	—	—	—	—	1	1	—	1	1	2	2	4
110	Rack Strips, 3½"	—	—	—	—	—	—	—	—	—	—	—	—	—	2	2	2	4
111	Bolts, ¾"	—	—	—	—	—	—	—	2	2	1	3	—	3	—	3	4	7
111A	" ½"	—	—	—	—	—	—	—	—	—	—	—	—	—	1	1	7	8
111C	" ¾"	4	2	6	—	6	—	6	—	6	—	6	—	6	—	6	6	12
113	Girder Frames	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4	4
114	Hinges	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2	2
115	Threaded Pins	—	—	—	—	—	1	1	1	2	—	2	—	2	—	2	7	9
116	Fork Pieces	—	—	—	—	—	—	—	1	1	—	1	—	1	1	2	—	2
116A	Small Fork Pieces	—	—	—	—	—	—	—	1	1	—	1	—	1	—	1	—	1
118	Hub Discs (5½" diam.)	—	—	—	—	—	—	—	—	—	—	—	—	—	1	1	3	4
119	Channel Segments (8 to circle)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	8	8
120A	Spring Buffers	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4	4
120B	Compression Springs	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2	2
121	Train Couplings	—	—	—	—	—	—	—	—	—	—	—	—	—	2	2	—	2
122	Miniature Loaded Sacks	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	12	12
123	Cone Pulleys	—	—	—	—	—	—	—	—	—	—	—	—	—	1	1	—	1
124	Reversed Angle Brackets, 1"	—	—	—	—	—	—	—	—	—	—	—	—	—	4	4	—	4
125	" " ½"	1	1	2	—	2	2	4	—	4	—	4	—	4	—	4	5	9
126	Trunnions	2	—	2	—	2	—	2	—	2	2	4	—	4	—	4	—	4
126A	Flat Trunnions	2	—	2	—	2	—	2	—	2	2	4	1	5	—	5	3	8
128	Boss Bell Cranks	—	—	—	—	—	—	—	—	—	—	—	1	1	1	2	—	2
129	Rack Segments (3" diam.)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4	4
130	Triple Throw Eccentrics	—	—	—	—	—	—	—	—	—	2	2	—	2	—	2	—	2
131	Dredger Buckets	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5	5
132	Flywheels, 2¾"	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	1
133	Corner Brackets	—	—	—	—	—	—	—	—	—	—	—	—	—	8	8	—	8
134	Crank Shafts, 1" stroke	—	—	—	—	—	—	—	—	—	1	1	—	1	—	1	—	1
135	Theodolite Protractors	—	—	—	—	—	—	—	—	—	—	—	—	—	1	1	—	1
136	Handrail Supports	—	—	—	—	—	—	—	—	—	—	—	—	—	4	4	—	4
137	Wheel Flanges	—	—	—	—	—	—	—	—	—	—	—	—	—	1	1	3	4
138A	Ship's Funnels, Cunard Type	—	—	—	—	—	—	—	1	1	—	1	—	1	—	1	1	2
140	Universal Couplings	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5	5
141	Wire Lines	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	1
142	Rubber Rings, 3" diam.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3	3
142b	Dunlop Tyres, 3" internal diam.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4	4
143	Circular Girders (5½" diam.)	—	—	—	—	—	—	—	—	—	—	—	—	—	1	1	—	1
144	Dog Clutches	—	—	—	—	—	—	—	—	—	—	—	—	—	1	1	—	1
145	Circular Strips (7" diam. overall)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	1
147A	Pawls	—	—	—	—	—	—	—	—	—	1	1	—	1	1	2	—	2
147B	Pivot Bolt with two nuts	—	—	—	—	—	—	—	1	1	—	1	—	1	1	2	4	6
148	Ratchet Wheels	—	—	—	—	—	—	—	—	—	1	1	—	1	1	2	—	2
149	Electric Collecting Shoes	—	—	—	—	—	—	—	—	—	—	—	—	—	1	1	—	1
155	Rubber Rings, ¾"	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	1
157	Fans, 2" diam.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	1
159	Circular Saws	—	—	—	—	—	—	—	—	—	1	1	—	1	—	1	—	1
160	Channel Bearings	—	—	—	—	—	—	—	—	—	1	1	—	1	—	1	—	1
162	Boiler, Complete with Ends	—	—	—	—	—	—	—	1	1	—	1	—	1	—	1	—	1

[CONTINUED OVERLEAF

Contents of Outfits—*continued*

No.	Description of Part.	00	00A	0	0A	1	1A	2	2A	3	3A	4	4A	5	5A	6	6A	7
163	Sleeve Pieces								2	2		2		2		2		2
164	Chimney Adaptors								1	1		1		1		1		1
165	Swivel Bearings								1	1	1	2		2		2		2
166	End Bearings...								1	1		1		1		1		1
169	Digger Buckets										1						2	12
301	Bobbins																12	12
302	Bushes, Insulating																14	14
303	Washers																30	30
304	6 B.A. Screws ,, ...																4	4
305	6 B.A. Nuts																2	2
306	Terminals																2	2
307	Contact Screw																2	2
308	Pole Pieces																2	2
309	Coil Cheeks																2	2
310	Lamp Holders																1	1
311	Lamps																1	1
312	27 Gauge B.I. Wire, 30" coils ...																1	1
313	26 ,, S.C.C. Wire, reel 50 yds. ...																1	1
314	23 ,, S.C.C. Wire, reel 25 yds. ...																1	1
315	Bare Copper Wire, 4 yds. coil ...																1	1
	Electric Manual of Instructions ...																1	1
	Clockwork Motors																1	1
	Electric Motor No. 1 (4-volt) ...																1	1
	Accumulators (8 amp.)...																1	1
	Instruction Leaflets:																	
	No. 9—Bagatelle Table	Model 6.16																
	,, 7—Platform Scales	,, 6.21																
	,, 10—Log Saw...	,, 6.22																
	,, 11—Horizontal Steam Engine	,, 6.29																
	,, 12—Stone-sawing Machine ...	,, 6.43																
	,, 1—Motor Chassis	,, 7.1																
	,, 5—Dredger	,, 7.2																
	,, 17—Planing Machine	,, 7.5																
	,, 18—Revolving Crane	,, 7.6																
	,, 19—Steam Shovel	,, 7.7																
	,, 13—Meccanograph	,, 7.8																
	,, 6—Stiff Leg Derrick	,, 7.9																
	,, 20—Aeroscope	,, 7.11																
	,, 21—Transporter Bridge ...	,, 7.12																
	,, 22—Tractor	,, 7.13																
	,, 23—Vertical Log Saw	,, 7.14																
	,, 14—Grandfather's Clock ...	,, 7.19																
	,, 16—Loom	,, 7.21																
	,, 24—Travelling Gantry Crane	,, 7.23																
	,, 25—Hydraulic Crane	,, 7.24																
	,, 2—High-speed Ship-Coaler	,, 7.28																
	,, 26—Twin-elliptic Harmonio-graph	,, 7.29																
	,, 3—Motor Cycle and Sidecar	,, 7.31																

STORAGE BOXES FOR MECCANO PARTS

The boxes illustrated and described below are specially designed for the purpose of storing Meccano parts. Almost every Meccano boy purchases additional parts from time to time, but there is sometimes difficulty in finding suitable accommodation for them. The Meccano Storage Boxes enable extra parts to be stored neatly and methodically so that they are always easily accessible.

No. 1

No. 1 Storage Box

Stained and varnished in rich oak finish, and fitted with partitions, as shown in the illustration. The lid is hinged and is secured by means of lock and key.

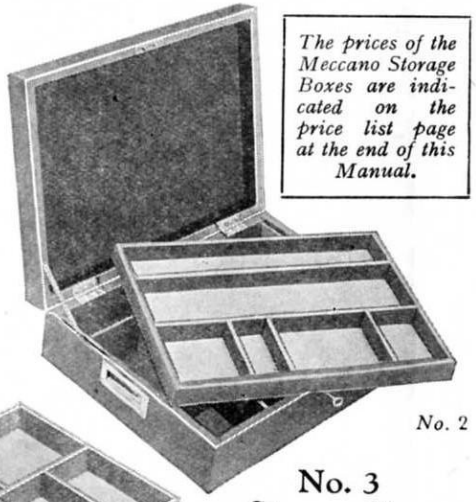
Dimensions: Length 15½ ins. Width 8¾ ins. Depth 2¾ ins.

No. 2 Storage Box

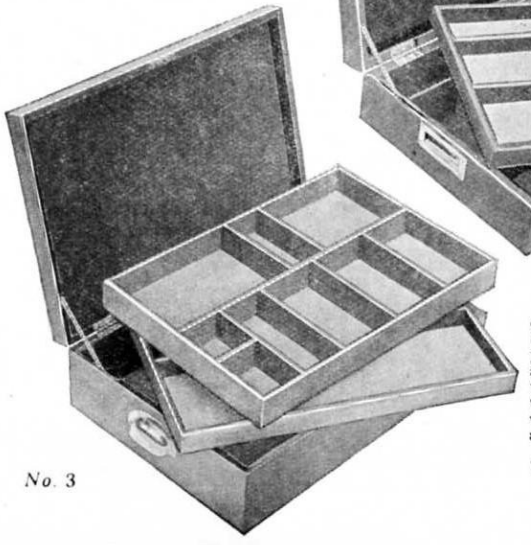
Finished as No. 1 Box and provided with lock and key. The tray with which it is fitted enables a much larger quantity of parts to be accommodated.

Dimensions: Length 14½ ins. Width 11 ins. Depth 3¾ ins.

The prices of the Meccano Storage Boxes are indicated on the price list page at the end of this Manual.



No. 2



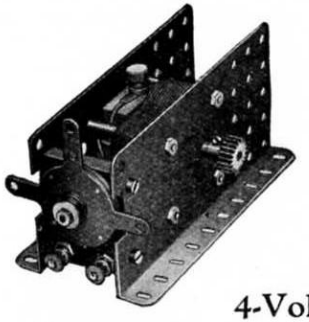
No. 3

No. 3 Storage Box

A perfect receptacle for Meccano parts, finished similarly to the No. 1 and No. 2 boxes and provided with lock and key. In addition to accommodation in the bottom section of the box there are two partitioned trays which fit neatly in position one above the other.

Dimensions: Length 20 ins. Width 14 ins. Depth 5½ ins.

MECCANO MOTORS



Electric Motor No. 1

(4-Volt)

The 4-volt Motor is specially designed to build into Meccano models. It may be run from a 4-volt Accumulator, or, by employing a suitable transformer, direct from the main. It is fitted with reversing motion, provided with stopping and starting controls, and the gearing is interchangeable.

4-Volt Accumulators

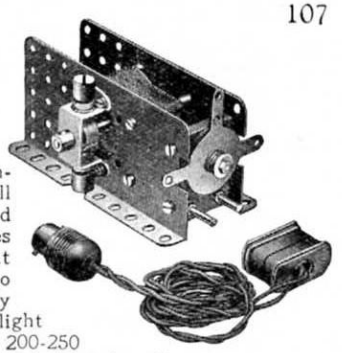
These new and excellent types of Accumulators have been adapted to drive the Electric Motor No. 1. They have been subjected to the severest tests and have proved themselves to be the most suitable accumulators for use with any type of electric motor. They are non-spillable, have remarkable recuperative powers, and will continue to supply current when nominally exhausted.

Transformer

By means of this transformer the Meccano Electric Motor No. 1 (4 volt) may be driven direct from the house supply (alternating current only). It is available for all standard supply voltages, from 100 to 250 inclusive, at all standard frequencies. The supply voltage and frequency must be specified when ordering.

Resistance Controller

By employing this variable resistance the speed of the Meccano Electric Motor No. 1 (4 volt) may be regulated as desired. The controller is connected in series with the motor and accumulator, or with the motor and transformer if a transformer is used as the source of power. It will not regulate the speed of a high-voltage motor connected to the main.

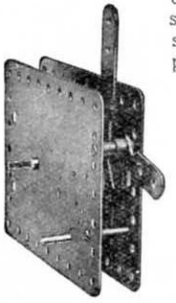


Electric Motor No. 2

(100-250 Volt AC or DC)

This reversible Electric Motor may be employed for any purpose for which a small motor is suitable, but it is specially adapted for driving Meccano models. The side plates are perforated with standard equidistant holes, thus allowing the motor to be built into any Meccano model. The motor is specially designed for connection with the electric-light main. It is suitable for 100-120 volts or 200-250 volts (alternating or direct), and is supplied with a 6 ft. length of flex, an insulated plug for connection with the motor terminals, and an adapter for connection with an ordinary lamp socket.

A suitable resistance is required when the motor is run with a 200-250-volt current, and this is supplied by connecting a 60-watt lamp in series with the motor. A board on which are mounted a suitable lamp-holder (lamp not included) and a switch is provided separately.



Clockwork Motor

The Meccano Clockwork Motor is specially made for the purpose of driving Meccano models. It is a fine piece of mechanism—simple, powerful, and reliable. The starting, stopping and reversing levers enable the operator to control the various movements of a model in exactly the same manner as an engineer does in actual practice.

MECCANO ACCESSORY OUTFITS

Meccano Accessory Outfits

Our illustration shows one of the Meccano Accessory Outfits. As has already been explained, these Outfits connect the main Outfits from No. 00 to No. 7, making it possible for a boy who commences with one of the earlier Outfits to build up his equipment by easy stages, until he is the possessor of parts that cover the entire system.

Special Inventor's Outfit

This Outfit is intended for boys who already have Meccano, and who wish to satisfy their inventive inclinations by building models from their own designs. The parts contained include four large Pulley Wheels with Dunlop Tyres, Ball Race, Ship's Funnel, Pulley Blocks, Channel Bearing, Crane Grab and many others.

For prices of above see price list at end of Manual.

HORNBY TRAINS

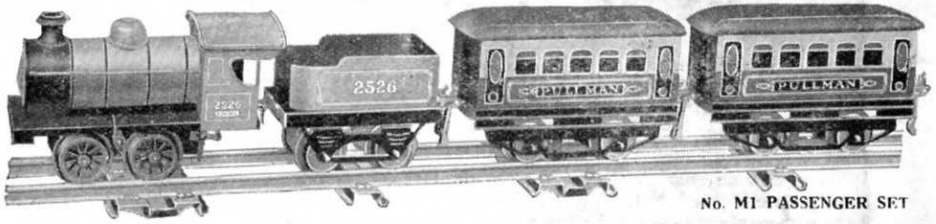
Hornby Trains are manufactured by Meccano Limited and they are made from the finest materials obtainable. Each train is a beautiful piece of workmanship with perfect mechanism. All Hornby Locos are carefully tested before leaving the factory and their efficiency is guaranteed.

No. M 1 Passenger Set

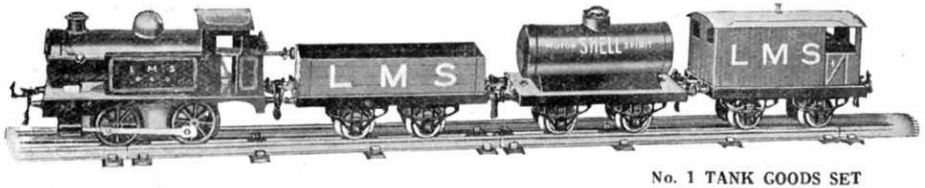
This set contains Loco, Tender, two Pullman Coaches and set of Rails. One of the latter is a brake rail by means of which the train may be braked from the track. Richly coloured and well finished; fitted with brake mechanism; non-reversing Gauge 0.

No. M 2 Passenger Set

Similar in every way to the above excepting that it has three Pullman Coaches instead of two, and additional rails.



No. M1 PASSENGER SET



No. 1 TANK GOODS SET

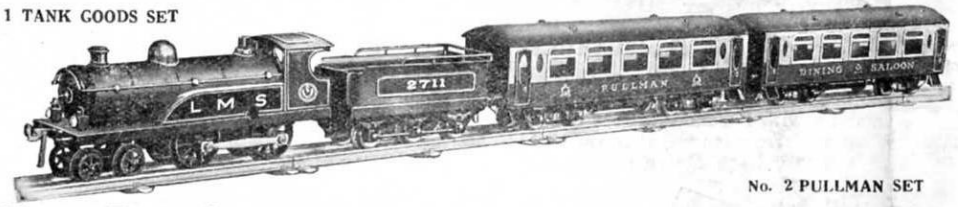
No. 1 Tank Goods Set

This set contains a No. 1 Hornby Tank Loco, Hornby Wagon, Petrol Tank Wagon, Brake Van and set of Rails to form either a circle 2 ft. in diameter or an oval 2 ft. in width by 2 ft. 10 in. in length. One of the rails is a brake rail by means of which the train may be braked from the track.

Gauge 0, in colours to represent the L.M.S.R., L.N.E.R., G.W.R. or S.R. Companies' rolling stock. The Loco is fitted with reversing gear and brake mechanism.

No. 2 Pullman Set

This set includes Loco and Tender of a larger type, measuring 17 in. in length. The Coaches are beautiful both in colour and finish. Each set includes Loco, Tender, and two Pullman Coaches, with set of Rails making a 4 ft. diameter circle. The rails include one brake rail by means of which the train may be both braked and reversed from the track. In colours to represent the L.M.S.R., L.N.E.R., G.W.R. or S.R. Companies' rolling stock. The Loco is fitted with reversing gear and brake mechanism. Gauge 0.



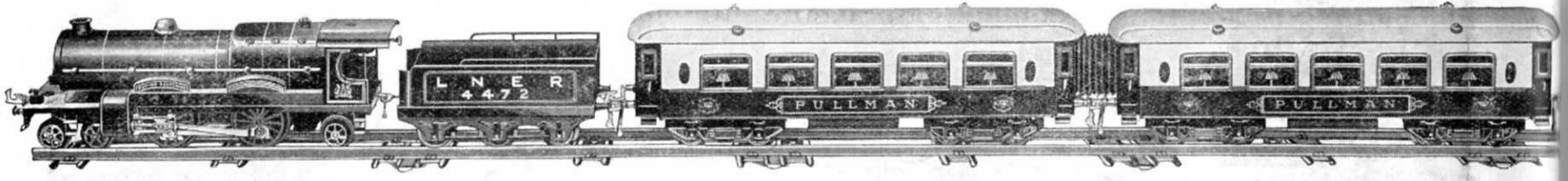
No. 2 PULLMAN SET

No. 3 Train Sets

These Train Sets are the latest additions to the range of Hornby Trains. They are distinctive in design, beautifully enamelled in correct colours and are guaranteed to give the utmost satisfaction.

Each locomotive carries the name of a famous British locomotive on the front wheel guard at each side. A special feature of the Pullman Coaches is the corridor connection, which gives the Train a most realistic appearance. All the doors of the coaches open.

The Trains in this series are "Cornish Riviera" (G.W.R.), "Flying Scotsman (L.N.E.R.), "Royal Scot" (L.M.S.R.), and "Dover Pullman" (S.R.). In each case the Train Set is available with either Clockwork or 4-Volt Electric Motor. Gauge 0.

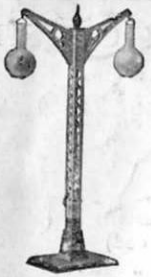


For prices of the above see price list at end of Manual

No. 3C L.N.E.R. "FLYING SCOTSMAN"

ROLLING STOCK AND ACCESSORIES

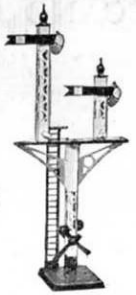
SIGNAL CABIN No. 2
Dimensions: Height 6½-in., Width 3¼-in., Length 6½-in. Finished in colours and lettered "Windsor." Roof and back open to allow a signal lever frame to be fitted inside cabin, if desired, and operated ... Price **6/6**



LAMP STANDARD No. 2 (DOUBLE)
Four-volt bulbs may be fitted into the globes.
Price **4/-**

RAILWAY STATION No. 2. Excellent model, beautifully designed and finished. Constructed in three sections which are detachable. Dimensions: Length 2-ft. 9-in., breadth 6-in., height 7-in. ... ... Price **10/-**

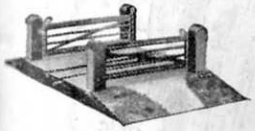
THE Hornby system consists of a complete range of Rolling Stock, Train Accessories, and Rails, Points and Crossings, with which the most elaborate model railway may be constructed. Every component in the Hornby Series is well designed and carefully modelled on its prototype in real life.



JUNCTION SIGNAL
Signal arms operated by levers at base. Very realistic model standing 14-in. in height.
Price **5/6**

TUNNEL
Realistic and finished in colours Price **7/6**

TURN-TABLE No. 1
Price **2/6**
TURN-TABLE No. 2
(illustrated) Price **4/-**

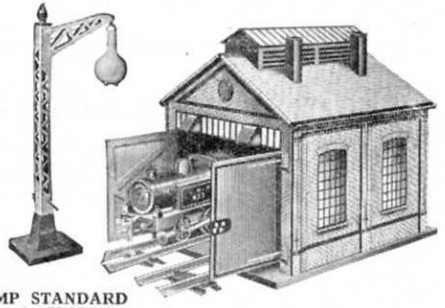


LEVEL CROSSING No. 1
Price **3/6**

***CRANE TRUCK**
Finished in grey and black ... Price **3/6**

***CEMENT WAGON**
Finished in grey and black ... Price **3/-**

***SNOW PLOUGH**
With revolving plough driven from front axle.
Price **5/6**



LAMP STANDARD No. 1 (SINGLE)
A 4-volt bulb may be fitted into the globe. ... Price **3/-**

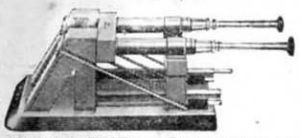
ENGINE SHED No. 1
(illustrated) Price **11/-**
ENGINE SHED No. 2
Price **17/6**

DOUBLE ARM SIGNAL
No. 1 Price **3/9** pair
No. 2 ,, **3/-** each

BUFFER STOPS No. 1 (SPRING)
Price **1/-**

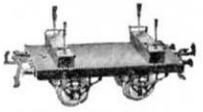
***GAS CYLINDER WAGON**
Finished in red, lettered gold. Price **2/6**

***HOPPER WAGON**
Mechanically unloaded. Finished in grey and black ... Price **4/-**



BUFFER STOPS No. 2 (HYDRAULIC)
Price **5/-**

LATTICE GIRDER BRIDGE
Constructional type. Strong and well proportioned.
Price **9/6**

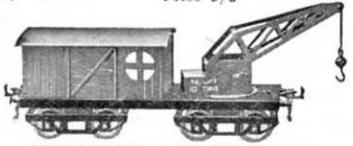


***LUMBER WAGON No. 1**
Fitted with bolsters and stanchions for log transport.
Price **2/-**

***MILK TRAFFIC VAN**
Fitted with sliding door, complete with milk cans.
Price **3/6**

***TIMBER WAGON No. 2**
Beautifully enamelled in green. Suitable for 2-ft. radius rails only ... Price **3/6**

***TROLLEY WAGON**
Finished in grey and red. Suitable for 2-ft. radius rails only ... Price **5/6**



***BREAKDOWN VAN AND CRANE**
Beautifully coloured in grey and black, with opening doors. Suitable for 2-ft. radius rails only ... ... Price **6/3**

***BRAKE VAN**
Finished in grey, with opening doors. Price **3/6**

*Lettered L.M.S., N.E., G.W. or S.R.

MECCANO PRICE LIST

MECCANO OUTFITS

No. 00 Meccano Outfit	3/6
„ 0 „ „	5/–
„ 1 „ „	10/–
„ 2 „ „	16/–
„ 3 „ „	27/6
„ 4 „ „	50/–
„ 5* „ „ (Carton)	65/–
„ 5* „ Presentation Outfit	95/–
„ 6* „ Outfit (Carton)	115/–
„ 6* „ Presentation Outfit	150/–
„ 7 „ „ „	380/–

ACCESSORY OUTFITS

No. 00A Meccano Accessory Outfit	1/6
„ 0A „ „ „	5/6
„ 1A „ „ „	7/–
„ 2A „ „ „	12/6
„ 3A „ „ „	23/6
„ 4A „ „ „	15/–
„ 5A* „ „ „ (Carton)	50/–
„ 5A* „ „ „ (Wood)	80/–
„ 6A „ „ „ „	215/–
Special Inventor's Outfit	17/6

* Outfits Nos. 5, 5A and 6 are supplied in neat and well-made cardboard boxes (cartons) or in superior oak cabinets, with lock and key.

MECCANO MOTORS, Etc.

Meccano Clockwork Motor	7/6
„ Electric Motor No. 1 (4 Volt)	15/6
„ „ „ „ 2 (100-120 or 200-250 Volt)	32/6
Transformer	30/–
Meccano Accumulator (4 Volt, 8 Amps.)	17/6
„ „ („ 20 „)	25/–
Lamp Board (with lamp holder and switch)	4/6
Resistance Controller (for low voltage motors)	3/6
Rheostat (for high voltage motors)	18/6
No. 1 Meccano Storage Box	10/6
„ 2 „ „ „	21/–
„ 3 „ „ „	30/–

Hornby Train Price List

No. M1 Passenger Set	7/6
„ M2 Passenger Set	9/–
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**The Hornby Control System enables you to manipulate the Signals and Points, and to control the Trains entirely from the Signal Cabin. A folder is available entitled " The Hornby Control System " which gives full details. Ask your dealer for a copy.*

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20,535/13 139,125
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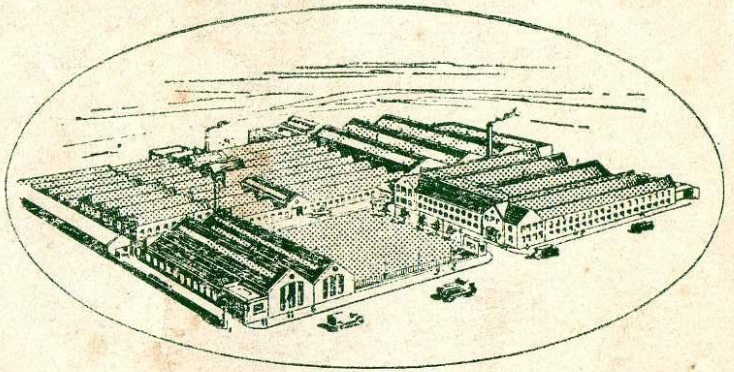
London, W.1.



Head Office and Factory :
BINNS ROAD, LIVERPOOL.

Meccano (France) Ltd.,
78-80 Rue Rebeval,
Paris XIXeme.

London Office and Warehouse :
Meccano Ltd.,
Walnut Tree Walk,
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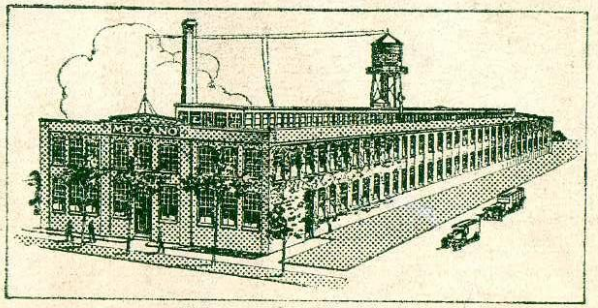

Meccano Company Inc.,
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