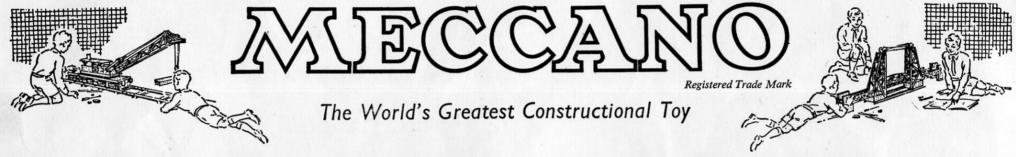


INSTRUCTIONS for OUTFIT No. 1

COPYRIGHT BY MECCANO LIMITED BINNS ROAD, LIVERPOOL 13, ENGLAND



MODEL-BUILDING WITH MECCANO

There is no limit to the number of models that can be built with Meccano — Cranes, Clocks, Motor Cars, Aeroplanes, Machine Tools, Locomotives — in fact everything that interests boys. A screwdriver and a spanner, both of which are provided in each complete Outfit, are the only tools necessary.

When you have built all the models illustrated in the Books of Instructions the fun is not over, it is just beginning. Now comes the chance to make use of your own ideas. First of all, re-build some of the models with small changes in construction that may occur to you; then try building models entirely of your own design. In doing this you will enjoy the real thrill of the engineer and the inventor.

HOW TO BUILD UP YOUR OUTFIT

Meccano is sold in 12 different Outfits, ranging from No. OO to No. 10. Each Outfit can be converted into the next larger one by the purchase of an Accessory Outfit. Thus Meccano No. OO Outfit can be converted into No. O Outfit by adding to it a No. OOa Accessory Outfit. No. Oa Outfit would then convert it into a No. 1 and so on. In this way, no matter with which Outfit you begin, you can build it up by degrees until you have a complete No. 10 Outfit.

All Meccano parts are of the same high quality and finish, but the larger Outfits contain a greater quantity and variety, making possible the construction of more elaborate models.

THE 'MECCANO MAGAZINE'

The 'Meccano Magazine' is published specially for Meccano boys. Every month it describes and illustrates new Meccano models, and deals with suggestions from readers for new Meccano parts and for new methods of using the existing parts.

There are model-building competitions specially planned to give an equal chance to the owners of small and large Outfits. In addition, there are splendid articles on such subjects as Railways, Famous Engineers and Inventors, Electricity, Bridges, Cranes and Aeroplanes, and special sections dealing with the latest Engineering, Aviation, Motoring and Shipping News. Other pages deal with Stamp Collecting, and a feature of outstanding popularity is the section devoted to short articles from readers.

Write to the Editor, the 'Meccano Magazine', Binns Road, Liverpool 13, for particulars and a specimen copy. You can order the Magazine from your Meccano dealer, or from any newsagent.

THE MECCANO GUILD

Every owner of a Meccano Outfit should join the Meccano Guild. This is a world-wide organisation, started at the request of Meccano boys. Its primary object is to bring boys together and to make them feel that they are all members of a great brotherhood, each trying to help others to get the very best out of life. Its members are in constant touch with Headquarters, giving news of their activities and being guided in their hobbies and interests. A leaflet containing full particulars of the Guild and an application form is included in this Book.

Clubs founded and established under the guidance of the Guild Secretary provide Meccano boys with opportunities of enjoying to the utmost the fun of model-building. Each has its Leader, Secretary, Treasurer and other officials. With the exception of the Leader, all the officials are boys, and as far as possible the proceedings of the clubs are conducted by boys.

MECCANO SERVICE

The service of Meccano does not end with selling an Outfit and a Book of Instructions. If ever you are in any difficulty with your models, or if you want advice on anything connected with this great hobby, write to us. We receive hundreds of interesting letters from boys in all parts of the world, and each of these is answered personally and promptly by one of our staff of experts.

Whatever your problem may be, write to us about it. We shall be delighted to help you in any way possible. Address your letters to *Information Service*.



Read the

MECCANO

THE IDEAL PAPER FOR BOYS

The happiest and most successful boys are those who take a keen interest in the world around them. The 'MECCANO MAGAZINE' is the ideal paper for these boys. Month by month its pages are filled with attractively-written articles, splendidly illustrated from actual photographs.

The subjects include Engineering in all its branches, Railways, Road Transport, Aeroplanes and Shipping. Inventions and Scientific Discoveries are described in simple language. Everything is dealt with in an attractive and straightforward style, and with an accuracy that has won for the Magazine the enthusiastic approval of the engineering, technical and scientific world. Special sections are devoted to Model-building with Meccano, fun with Dinky Toys and the operation of realistic Miniature Railways; and Stamp Collecting forms still another important feature. Competitions of all kinds, and of a variety to suit every reader, are announced each month.



Myseen

Join the

MECCANO

WHAT THE GUILD MEANS

The Meccano Guild is an organisation for boys, started at the request of boys, and as far as possible conducted by boys. In joining the Guild a Meccano boy becomes a member of a great brotherhood of world-wide extent. Wherever he happens to be, even in strange countries, he will know that he has met a friend whenever he sees the little triangular badge of membership. The Meccano Guild is bringing together Meccano boys all over the world, and helping them to get the best out of life. At its head — guiding and controlling and taking a personal interest in this great movement — is the President, Mr Roland G. Hornby, son of the inventor of Meccano.

HOW TO JOIN THE MECCANO GUILD

Any owner of a Meccano Outfit, no matter what its size, may become a member. All he has to do is to fill in the official application form on the back of this leaflet, have his signature witnessed, and send the form to Headquarters with a postal order (not stamps) for the necessary amount in payment for the official badge, which he will wear in his buttonhole.

The price of the badge for boys living in the British Isles is 1/-. For those living overseas it is 1/6 (30 cents in Canada).

Applicants living in Canada, Australia, New Zealand or South Africa should write to the Meccano agents in their countries. Their addresses are as follows:

AUSTRALIA:

New South Wales and A.C.T. - E. G. Page & Co. (Sales) (Pty.) Ltd, Danks Building, 324 Pitt Street, N.S.W.

Queensland and Northern Territories - Thomas, Brown & Sons Ltd, (P.O. Box 144C), Eagle Street, Brisbane, Queensland.

South Australia - Harris, Scarfe Ltd, Grenfell Street, Adelaide.

Victoria and Tasmania — Ponsford Newman & Benson Ltd, 234 Flinders Lane, Melbourne, Victoria.

Western Australia - P. Falk & Co. Ltd, 317-9 Murray Street, Perth.

CANADA: Meccano Ltd, 675 King Street West, Toronto.

NEW ZEALAND: Models Ltd (P.O. Box 129), 53 Fort Street, Auckland, C.I.

RHODESIA: Woolley, Kinleyside & Co. (Pvt.) Ltd, P.O. Box 299, Bulawayo.

SOUTH AFRICA: Arthur E. Harris (Pty.) Ltd (P.O. Box 1199), 142 Market Street, Johannesburg.

Their Badges and Certificates are then forwarded without delay, while their application forms are sent to Headquarters in Liverpool.

Applicants living in any other country overseas should forward their forms, with a British postal order (not stamps) or a money order for 1/6, direct to the Secretary, the Meccano Guild, Binns Road, Liverpool, 13.

Guild members are eligible for the Correspondence Club, by which they are placed in touch with other members in various parts of the world. Full particulars and enrolment forms can be obtained from the Secretary.

The Secretary will send also, on request, full details of the Guild Recruiting Campaign, and of the Medallion awarded to members who are successful in obtaining recruits, together with particulars of the Meccano clubs founded and established by enthusiastic Meccano boys. A special booklet, 'How to run a Meccano Club' will be sent post free to any member on receipt of 2d. in stamps.

MECCANO

for the really modern boy

The 'MECCANO MAGAZINE' is on sale at all bookstalls, newsagents and Meccano dealers, price 1/3. If you prefer to have each issue sent direct, the subscription rates are 18/- for twelve months or 9/- for six months, including postage, and an order form is attached.

The overseas prices of the 'M.M.' are 15c. in Canada, 1/6 in Australia, 18c. in the U.S.A. and 1/- elsewhere.

ORDER FORM

TO THE EDITOR,
MECCANO MAGAZINE,
BINNS ROAD, LIVERPOOL 13.

I enclose Postal Order for Please post the
'MECCANO MAGAZINE' for months, beginning with
the issue.

NAME (IN BLOCK LETTERS)

MECCANO

THE THREE GREAT OBJECTS OF THE GUILD

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



BADGE OF MEMBERSHIP

Headquarters: BINNS ROAD LIVERPOOL 13

APPLICATION FOR MEMBERSHIP-

I possess a Meccano Outfit, and I hereby make application for membership of the Meccano Guild. I approve of the objects of the Guild, and I promise on my honour

- (1) To conform to the rules and regulations of the Meccano Guild.
- (2) To promote its objects by my own example: to be helpful to others; to be clean in thought and habit; to be determined to learn and make progress.
- (3) To wear the Meccano Guild Badge on all possible occasions.
- (4) To recognise and acknowledge all other Members wearing the Guild Badge, and to render them help in case of need.

I enclose 1/- for the Guild Badge (Great Britain).

I enclose 1/6 for the Guild Badge (Overseas).

I enclose 30c. for the Guild Badge (Canada).

Strike out line not applicable (See other side of this form).

NAME OF APPLICANT

(BLOCK LETTERS PLEASE)

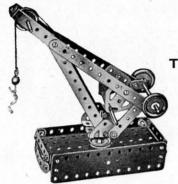
ADDRESS

DATE SIZE OF OUTFIT OWNED NO. AGE

WITNESS

ADDRESS

The witness should be the Parent, Guardian, Employer, Schoolmaster or Church Minister and should state which when signing.



This Dockside Crane can be built with Outfit No. 1

HOW TO BEGIN THE FUN

THE MOST FASCINATING OF ALL HOBBIES

Meccano model-building is the most fascinating of all hobbies, because it never becomes dull. There is always something new to be done. First of all there is the fun of building a new model, and watching it take shape as part after part is added. Then, when the model is complete, comes the thrill of setting it to work just like the real structure it represents, by means of a Meccano Motor.

The following hints are given to show boys who are just starting the wonderful Meccano hobby how to get the greatest possible fun.

A FEW USEFUL HINTS

It will be noticed that with each model in this Book of Instructions is given a list of the parts required to build it. For the first few models it is a good plan to lay out on the table all the parts required for the one it is proposed to build, and put the remainder of the Outfit to one side. To help you to pick out the correct parts for your model a complete list of Meccano parts is given at the back of this Book, and all the principal parts are illustrated. In the list the parts are all numbered, and in most cases their measurements are given. There is no need, however, to measure the parts to find out which is which, as the size is easily found from the number of holes. All Meccano holes are spaced $\frac{1}{2}$ " apart, so that by counting two holes to the inch the size of a part can be found at once. For instance, Part No. 2 is listed as a $5\frac{1}{2}$ " Perforated Strip, so you look in your Outfit for a Strip with eleven holes. Similarly No. 189 is a $5\frac{1}{2}$ "× $1\frac{1}{2}$ "

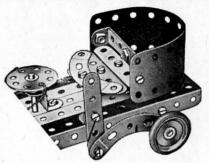
Flexible Plate, so you look for a Flexible Plate eleven holes in length and three holes in width. By the time a few models have been built the names of the parts will have become familiar.

Beginners sometimes wonder which section of a model should be built first. There cannot be any definite rule for this, as it depends on the design of the model. In stationary models the base usually should be built first. In most of the small models a $5\frac{1}{2}''\times2\frac{1}{2}''$ Flanged Plate forms an important part of the structure, and often the best plan is to start building by bolting parts to this Plate. For other models a good general rule is that the sections that form supports for a number of other parts should be built first.

During the construction of a model it is best to screw up the nuts with the fingers, followed by a light turn with the screwdriver, leaving the final tightening until all the parts are connected up.

THE IMPORTANCE OF LOCK-NUTTING

In some models it is necessary to join certain parts together so that, although they cannot come apart, they are free to pivot or move in relation to one another. To do this the parts are bolted together as usual, but the nut is not screwed up tightly, so that the parts are not gripped. Then, to prevent the nut from unscrewing, a second nut is screwed up tightly against it, the first nut being



A Flexible Plate used to form a curved surface

held with a spanner. This method of using a second nut is known as Lock-nutting.

In building models in which Rods revolve in the holes of other parts it is important to make sure that such holes are exactly in line with one another. This can be done by pushing through the holes a Drift, Part No. 36c, or a Rod, before the Bolts holding the various parts are tightened up.

A Rod is usually mounted in a support or bearing so that it is free to revolve. The Rod is then said to be *Journalled* in the Strip.

DRIVING YOUR MODELS

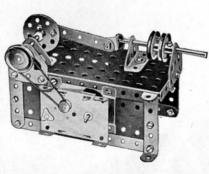
Models can be driven by means of either clockwork or electric motors. Ask your Dealer for particulars of Meccano Clockwork and Electric Motors.

Small and light models may be driven direct from the driving pulley of the motor or through a belt running over two pulleys of the same size, giving what is known as a 1:1 (one-to-one) ratio. For large models it is necessary to take the drive from a small pulley on the motor shaft to a larger pulley on the driving shaft of the model. In most cases a 1" Pulley on the motor shaft and a 3" Pulley on the model shaft will be found satisfactory. This provides a reduction ratio of approximately 3:1.

Rubber bands are very convenient for driving belts. Sometimes, however, a rubber band of the right length is not available, and then Meccano Cord or thin string is used. To tie the Cord to form an endless belt, use the familiar reef knot.

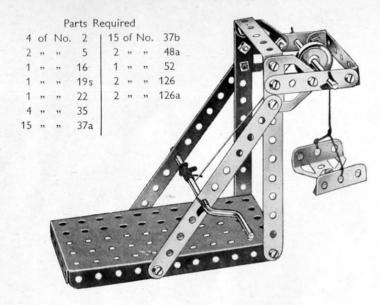
All Outfits from No. 2 upward include a Cord Anchoring Spring, Part No. 176. This part provides a neat and positive method of fastening a length of Cord to a Rod. The Spring is placed on a Rod by pushing and turning it in such a way that its coils tend to unwind.

Flexible Plates are used for forming curved surfaces in models, but they are not intended to be bent at right angles. With careful handling a Plate can be bent to the required curve and after use straightened again.



A 'Magic' Motor fitted to drive a Steam Engine

O.I ELEVATOR



0.4 STATION TRUCK

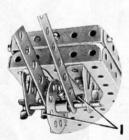
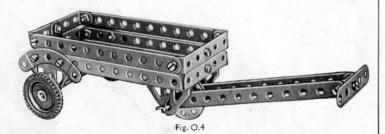


Fig. O.4a

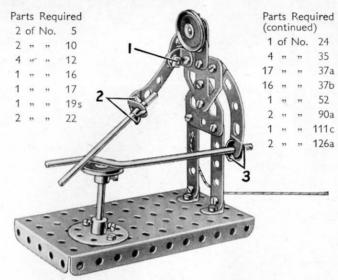
The 5½" Strips forming the handle are placed one on each side of a Bush Wheel on the front axle, and they are held in place by Spring Clips (1) as shown in Fig. O.4a.

Parts Required

4	of	No.	2	1 2	of	No.	22	2	of	No.	48a
											52
2	"	"	10	4	"	,,	35	2	,,	,,	90a
2	"	,,	12	17	**	"	37a	2	,,	,,	126
1	,,	"	16	17	"	**	37b	2	,,	,,	126a
1	,,	**	17	1	,,	"	38	2	,,	,,	142c

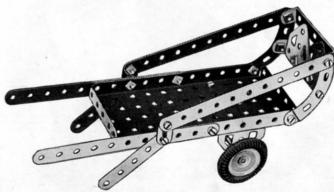


O.2 BLACKSMITH



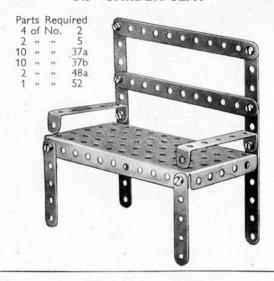
The arm holding the hammer is a $2\frac{1}{2}$ " stepped Curved Strip, pivoted to an Angle Bracket by a *lock-nutted* Bolt (1). The hammer is a $3\frac{1}{2}$ " Rod held in an Angle Bracket at the end of the arm by two Spring Clips (2). The Crank Handle is fixed in the other arm by the Spring Clips (3).

O.5 COSTER'S BARROW



						Requ					
4	of	No.	2	1 2	of	No.	22 37a 37b 48a 52	2	of	No.	90a
2	,,	,,	5	16	"	,,	37a	2	,,	,,	126
2	,,	,,	10	16	"	"	37b	2	,,	,,	126a
1	"	,,	16	2	"	"	48a	2	"	"	142c
				1	"	"	52				

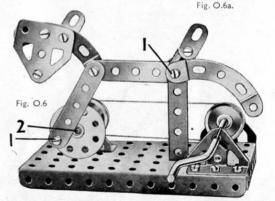
O.3 GARDEN SEAT



O.6 BUCKING BRONCHO

The Bolts (1) are fitted with *lock-nuts* so that the parts they attach are free to pivot. Bearings for a 2" Rod, the end of which is seen at (2), are provided by a Fishplate (3), Fig. O.6a, bolted to an Angle Bracket (4), and a Trunnion (5).

										_	
11	ts	Requ	uired	1 20	of	No.	37a		/	-	>
		No.	5	15	,,	"	37b	/	1	3	5
1	,,	**	10	1	,,	"	38	1.	. 14	00	1
	,,	"	12	1	,,	"	48a	1	- BA		
	,,	**	17	1	"	22	52		,		1
	,,	"	19s	2	,,	- 22	90a	1 .	4 —	- 10	05/
2	"	,,	22	2	,,	"	111c	1	1		
	,,	,,	24	2	,,	"	126	1			
1	22	"	35	2	,,	"	126a		-		
									mr.	01	



O.7 SWING BOAT

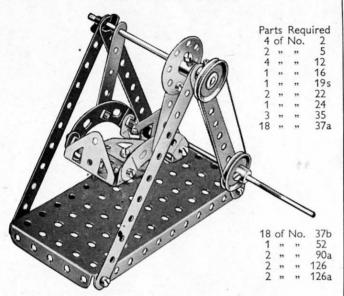
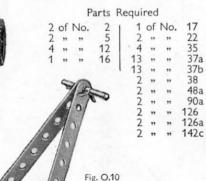


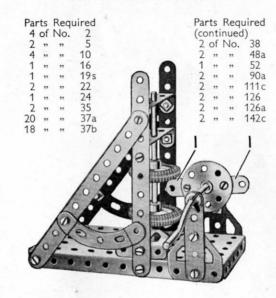
Fig. O.10a

O.10 LAWN MOWER



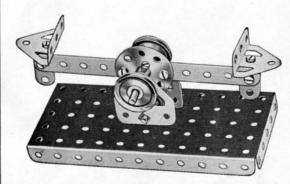


O.8 DROP HAMMER



The hammer, which is formed by the two 1" Pulleys on a 3½" Rod, is lifted by the Fishplates (1) as they rotate when the Crank Handle is turned. The Fishplates are bolted to a Bush Wheel fixed on the Crank Handle.

O.II COUNTER SCALES

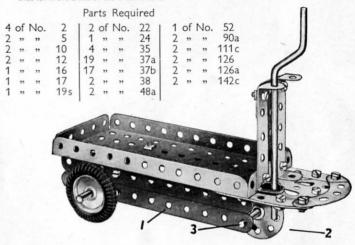


Parts Required

1	of	No.	2	2	of	No.	22	1 2	of	No.	38
2	,,	"	10	1	,,	"	24	1	"	"	52
4	,,	"	12	9	,,	"	37a	2	"	"	126
1	"	"	2 10 12 17	9	,,	"	37b	2	"	"	126a

0.9 ELECTRIC TRUCK

The two $5\frac{1}{2}$ " Strips (1) on each side of the model are fastened to the Flanged Plate by two Trunnions secured to the Plate on the underneath side. A Bush Wheel (2) is fixed on the 2" Rod (3), which passes through the end holes of the $5\frac{1}{2}$ " Strips that form the sides of the truck frame.

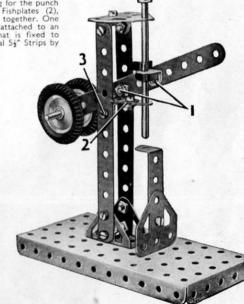


O.12 PUNCHING MACHINE

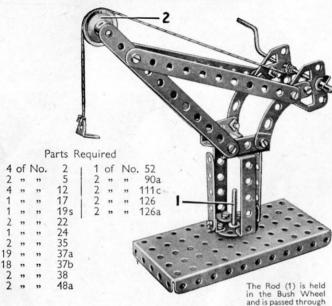
The Bolts (1) are lock-nutted. The lower bearing for the punch consists of two Fishplates (2), which are bolted together. One of them is then attached to an Angle Bracket that is fixed to one of the vertical 5½" Strips by the Bolt (3).

Parts Required

		No.	2
2	,,	,,	10
4	,,	"	12
1	,,	"	16
1	**	"	17
2	"	"	22
1	**	"	24
18	,,	**	37a
16	,,	"	37b
1	,,	,,,	48a
1	,,	"	52
2	"	"	126
2	,,	"	126a
2	**	**	142c



O.13 DOCKSIDE CRANE

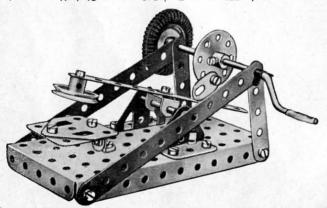


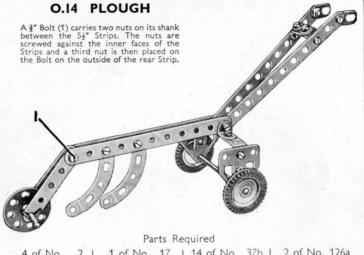
and is passed through one of the holes of the Flanged Plate. A 1" Pulley fixed on the Rod underneath the Flanged Plate holds the crane in position on its base. The Pulley (2) is mounted on a §" Bolt. The Bolt is passed through the top hole of one of the 5½" Strips, and is gripped by the set-screw in the boss of the Pulley.

0.16 MECHANICAL HAMMER

Parts Required

3	of	No.	2	1	of	No.	19s	11	5	of	No.	37b	1 2	of	No.	126a
2	"	- "	5	2	"	22	22		1	"	**	38	1	"	"	142c
1	"	"	10	1	"	"	24	100	1	,,	22	52				
4	"	"	12	3	,,	"	35		1	"	"	111c				
1	99	"	17	15	,,	"	37a		2	22	"	126				





4	of	No.	2	1 1	of	No.	17	14	of	No.	37b	2	of	No.	126a
2	,,	,,	5	2	"	"	22	2	. ,,	,,	38	2	"	,,	142c
3	,,	"	10	1	,,	22	24	1	,,	,,	48a				
4	"	"	12	2	,,	"	35	2	,,	"	90a				
1	"	"	16	17	"	"	37a	1	"	"	37b 38 48a 90a 111c				

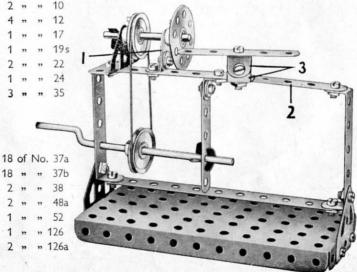
Parts Required

2 of No. 2

2 " " 5

O.17 LATHE

The inner support for the lathe spindle consists of a Fishplate (1) bolted to an Angle Bracket fixed to the $5\frac{1}{2}$ " Strip (2) that forms the lathe bed. The tool rest is a $2\frac{1}{2}$ " Strip that is supported by two Angle Brackets (3) bolted together to form a U-shaped piece.

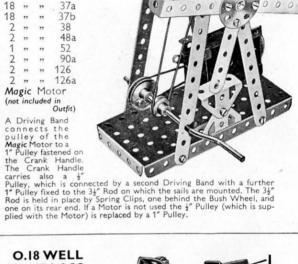


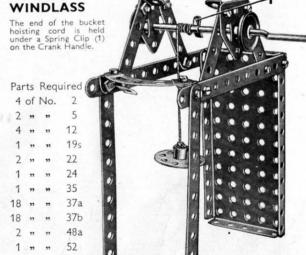
O.15 WINDMILL

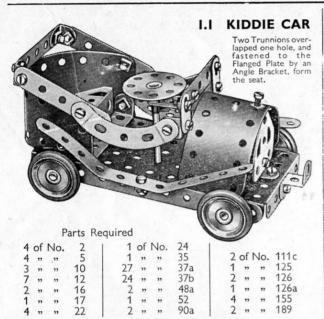
Par	ts	Regi	uired
4	of	No.	2 5
2	,,	"	5
1	"	,,	16
1	"	"	19s
2	"	"	22
1	"	,,	24
3	,,	"	35
18	,,	"	37a
18	,,	"	37Ь
2	,,	,,	38
2	,,	,,	48a
1	,,	"	52
2	,,	,,	90a
2	"	,,	126
2	,,	**	126a
Ma	air	Mo	tor

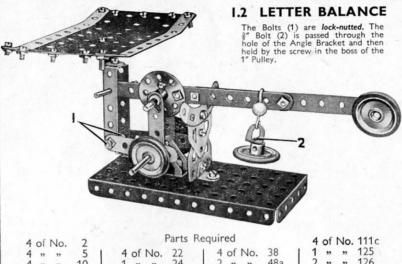
A Driving Band connects the pulley of the Magic Motor to a 1" Pulley fastened on

126a







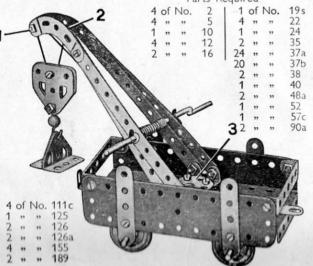


4	of	No.	2			-	Parts R	equire	D			4	of	No.	1110
	-	"	5	1 4	of	No.	22	1 4	of	No.	38	1 1	"	"	125
4	,,	,,		1	"	"	24	2	"	"	48a	2	,,	"	126
2	,,	"	12	4	,,	"	35	1	"	"	52	2	"	"	126a
1	"	**	16	28	"	"	37a	1	"	"	57c	4	,,	"	155
2	,,	,,	17	24	,,	"	37b	1	**	,,	90a	2	,,	"	189

I.4 RAILWAY BREAKDOWN CRANE

The hoisting Cord is secured to the Crank Handle and then led over the $\frac{3''}{4}$ Bolt (1). It is then passed through the pulley block and fastened to the jib at (2). The jib is attached to the Bush Wheel (3) by means of Angle Brackets, and the complete unit is pivoted as follows. A $\frac{3''}{4}$ Bolt is passed through the $5\frac{3''}{4} \times 2\frac{3''}{4}$ Flanged Plate from the underside, and is secured in the boss of the Bush Wheel by its set screw.

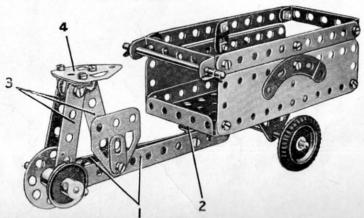




1.5 TRICYCLE VAN

Parts Required

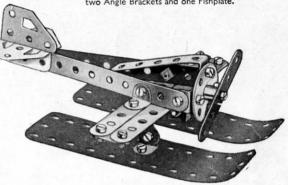
4	of	No.	2	1 1	of	No.	17	1 24	of	No.	37b	2	of	No.	111c
		"	5	3	,,	"	22	3	"	,,	38				126
3	,,	,,	10	1	"	"	24	2	22	"	48a	2	"	**	126a
6	"	,,	12	4	"	"	35	1	**	**	52	2	"	22	142c
2	,,	"	16	27	,,	"	37a	2	"	**	90a	2	"	"	189



The frame of the cycle consists of two 5½" Strips (1) connected at one end by a bolt that fixes them also to an Angle Bracket (2). The Angle Bracket pivots on a bolt *lock-nutted* to the Flanged Plate. The seat is carried by three 2½" Strips (3), each of which is connected by an Angle Bracket to the Flat Trunnion (4). The front axle is carried in Trunnions bolted underneath the Flanged Plate.

1.3 RACING SEAPLANE

Each of the floats is secured to the wings by two Angle Brackets and one Fishplate.

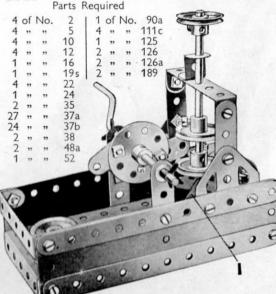


Parts Required

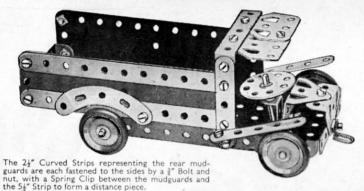
3	of	No.	2	1 1	of	No.	24	2	of	No.	111c
3	,,	,,	5	1			37a				126
4	,,	,,	10	19	,,	,,,	37b	1	"	"	126a
8	,,	"	12	1	"	"	48a	2	99	"	189

1.6 STAMPING MILL

The anvil (1) is made up of two Trunnions bolted together. When the Crank Handle is rotated, the Fishplates bolted to the Bush Wheel strike the centre 1" Pulley on the hammer shaft and cause it to rise



1.7 MOTOR LORRY

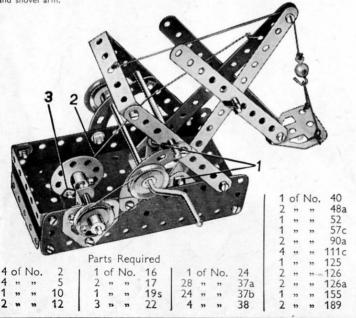


							Parts	Regu	ire	d						
4	of	No.	2	1 4	of	No.	22	1 2	of	No.	48a	2	of	No.	126	
4	"	"	5	1	"	"	24	1	,,	"	52	2	,,	"	126a	
											90a					
2	"	"	16	23	,,	"	37a	3	,,	,,	111c	2	"	"	189	
1	"	"	17	19	"	"	37b	1	,,	.,,	125					

1.8 MECHANICAL SHOVEL

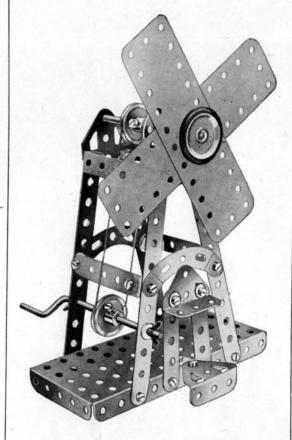
The Bolts (1), on which the jib pivots, are *lock-nutted*. The shovel arm is pivoted on a 2" Rod and the shovel is supported by a Cord that passes over the $\frac{2}{3}$ " Bolt at the jib head and is fastened to a $2\frac{1}{3}$ " $\frac{1}{3}$ " Double Angle Strip as shown. The Cord (2) is fastened to the jib and then passes over a $3\frac{1}{2}$ " Rod journalled in the holes above the $2\frac{1}{3}$ " Curved Strips, and is attached to a Fishplate fastened by the *lock-nutted* Bolt (3) to the Bush Wheel. When the Crank Handle is rotated, the Bush Wheel imparts a digging motion to the jib

and shovel arm.

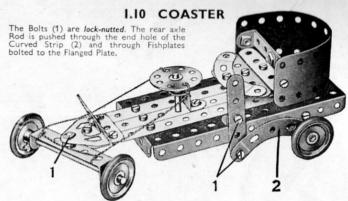


1.9 WINDMILL

The sails are gripped on the $3\frac{1}{2}$ " Rod by the 1" Pulley (with Rubber Ring) at the front and another 1" Pulley at the back of the sails. The Pulleys are pressed against the faces of the sails and locked on the Rod.



				Pa	rts	Kequ	ured				
4	of	No.	2	1 1	of	No.	24	1	of	No.	52
4	"	"	5	3	"	,,	35	2	,,	"	90a
1	,,	**	10	24	,,	,,	37a	2	"	,,	126
4	,,	"	12	24	22	**	37b	2	,,	"	126a
1	,,	"	16	4	,,	"	38	1	"	"	155
1	"	"	19s	1	"	"	40	2	,,	"	189
4	"	23	22	2.	"	**	48a	P.			



Parts Required

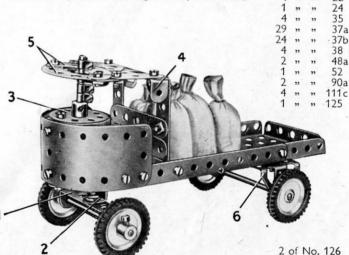
									4	-						
3	of	No.	2	1 .	10	fN	0.	22	1 1	of	No.	40	2	of	No.	126
4	"	,,	5	1 '	,	, ,	,	24	2	"	"	48a	2	"	,,	126a
2	"	"	10	1	١,	, ,	,	35	1	"	,,	52	4	"	"	155
5	,,	,,	12	2.	1 ,	, ,	,	37a	2	,,	"	52 90a	1	**	**	189
2	"	**	16	20) ,	, ,	,	37b	2	,,	"	111c				
1	"	"	17		1 ,	, ,	,	38	1	,,	"	125				

Parts Required

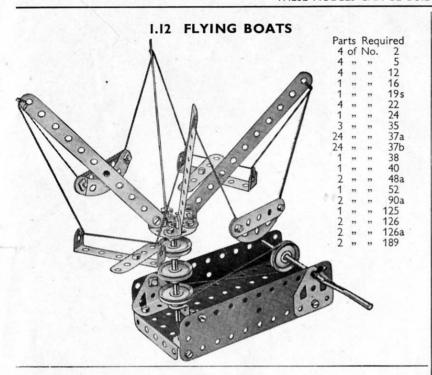
3 of No.

I.II STEAM WAGON

The front axle is supported in a $2\frac{1}{2}'' \times \frac{1}{2}''$ Double Angle Strip (1) lock-nutted to a $\frac{1}{2}''$ Reversed Angle Bracket (2). The Reversed Angle Bracket is bolted to a $5\frac{1}{2}''$ Strip fixed to the centre of the Flanged Plate. The boiler is a $5\frac{1}{2}'' \times 1\frac{1}{2}''$ Flexible Plate rolled into a cylinder, and the Bush Wheel (3) is attached to an Angle Bracket. The roof is made from two Flat Trunnions bolted to a 2½"×½" Double Angle Strip (4). The Curved Strips (5) are connected to the Flat Trunnions by Fishplates. A Trunnion (6) at each side is spaced from the Flanged Plate by two Washers,

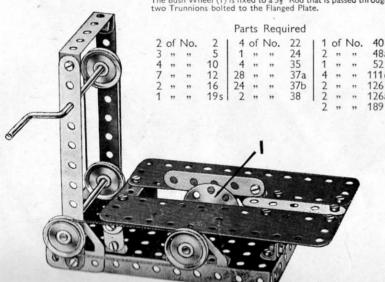


4 " " 142c Nete: The Loaded Sacks (Part No. 122) are not included in the Outfit 2 " " 189



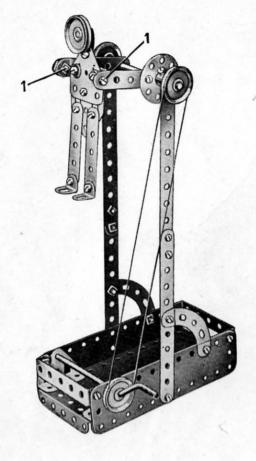
1.13 CIRCULAR SAW

The Bush Wheel (1) is fixed to a $3\frac{1}{2}$ Rod that is passed through two Trunnions bolted to the Flanged Plate.



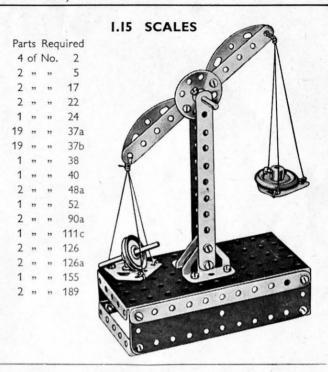
1.14 GYMNAST

The Bolts (1) are *lock-nutted*. The bearings for the Crank Handle in the Flexible Plates are reinforced by Trunnions bolted to the Flanged Plate.

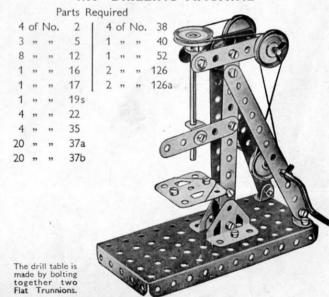


Parts Required

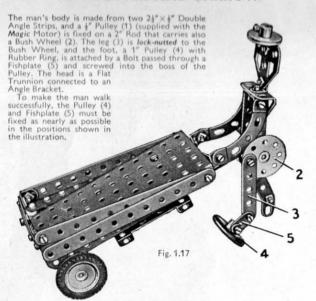
						Medi					
4	of	No.	2	1 1	of	No.	24	1	of	No.	52
4	"	,,	5	2	"	"	35	2	"	,,	90a
1	,,	,,	10	29	,,	,,	37a	4	"	"	111c
4	,,	,,	12	24	"	"	24 35 37a 37b	2	"	,,	126
1	,,	,,	16	4	"	"	38	2	"	"	126a
1	"	"	19s	1	"	"	38 40	2	"	"	189
4	"	"	22	2	"	"	48a				



1.16 DRILLING MACHINE

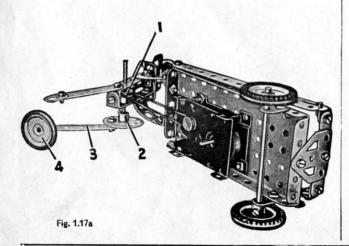


1.17 COSTER AND BARROW

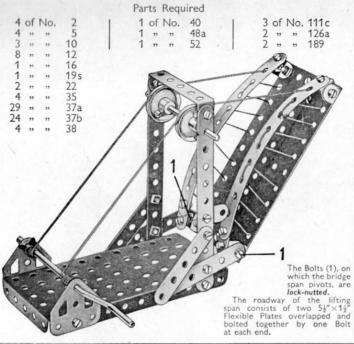


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Parte	Required

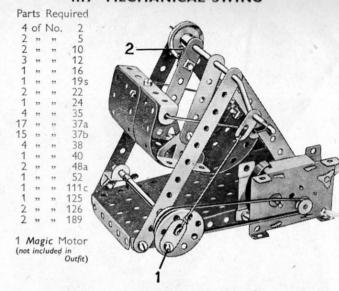
4	of	No.	2	27	of	No.	37a	1 2 of No. 126a
3	,,	"	5	24	,,	"	37b	2 " " 142c
4	,,	"	10	4	,,	,,	38	1 " " 155
6	"	"	12	2	,,	"	48a	
1	**	**	16	1	,,	"	52	1 11 - 1 - 1
1	"	"	17	2	"	**	90a	1 Magic Clock-
4	,,	"	22	3	,,	"	111c	work Motor
1	"	"	24	1	**	,,	126	(not included in Outfit)



1.18 LIFTING BRIDGE



1.19 MECHANICAL SWING



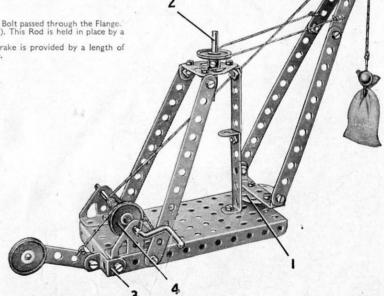
The left-hand 2½" Strip that supports the swing is connected to the Crank Handle by passing the set screw of the 1" Pulley (2) through a hole in an Angle Bracket bolted to the Strip and then into the boss of the Pulley. Bolt (1) on the Bush Wheel is fitted with lock-nuts.



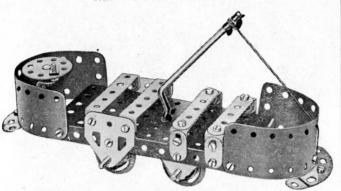
The jib is bolted to a Bush Wheel (1), which is fixed by its set-screw on a 2" Bolt passed through the Flange. Plate. The jib supporting Cord is passed round a 1" Pulley on a 2" Rod (2). This Rod is held in place by a Spring Clip placed underneath the Flat Trunnion.

The brake lever is lock-nutted to a ½" Reversed Angle Bracket (3). A brake is provided by a length of Cord passed over Pulley (4) and tied to the lever and to the Flanged Plate.

				Par	rts	Requ	uired	
4	of	No.	2	4	of	No.	35	1 of No. 90a
4	,,	,,	5	21	**	"	37a	2 " " 1110
3	"	"	12	20	,,	"	37b	1 " " 125
2	"	,,	17	1	"	"	40	2 " " 126
1	,,	,,	19s	2	"	,,	48a	1 " " 12.6a
4	,,	,,	22	1	"	"	52	(Loaded Sack, Part
1	"	,,	24	1	,,	"	57c	No. 122, not included in Outfit)



1.21 OPEN TRAMCAR



Parts Required

1	of	No.	5	1	1	of	No.	19s	1	of	No.	52
ľ	,,	"	10		4	,,	"	22	2	"	22	90a
7	,,	,,	12		1	"	"	24	4	"	"	111c
)	,,	"	16		4	"	,,	35	1	"	"	125
					27	,,	"	37a	2	,,	"	126
					24	**	"	37b	2	,,	"	126a
					1	,,	,,	40	4	,,	**	155
					2	**	**	48a	2	**	**	189

0000000

1.22 FIRE ENGINE

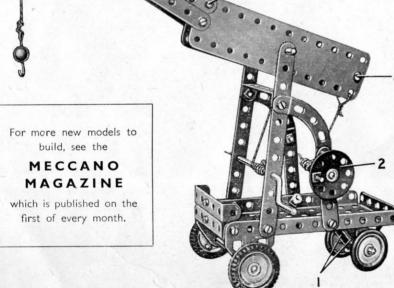
Bolts (1) at each side are lock-nutted. The sides of the ladder are held together by two Angle Brackets (2), which are bolted together to form a 'U'-shaped bracket. The rear Parts Required 4 of No. axle bearings (3) are Fishplates bolted inside the flange of the Flanged Plate. The Cord from the Crank Handle is tied in the fourth hole up the ladder so that when the Handle is 10 12 turned it causes the ladder to lift. 16 17 195 (A) (30) BAO 22 24 37b 38 48a 52 111c 126a 155

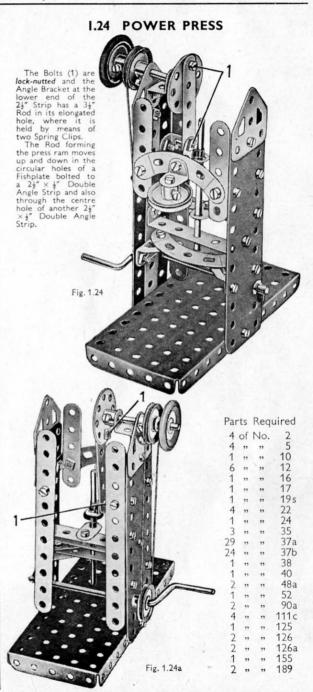
				Par	ts	Requ	ired				
4	of	No.	2	4	of	No.	35	3	of	No.	111c
4	"	,,	5	29	"	,,	37a	1	,,	,,	125
1	,,	,,	10	23	,,	,,	37b	2	,,	"	126
4	,,	,,	12	2	"	"	38	2	,,-	,,	126a
2	,,	,,	16	1	"	"	40	2	,,	,,	142c
2	"	,,	17	2	,,	,,	48a	2	,,	,,	155
1	"	,,	19s	1	,,	,,	52	2	,,	,,	189
4	,,	,,	22	1	,,	,, -	57c				
1	"	,,	24	2	"	"	90a				P .

The rear wheels are fixed on a 2" Rod supported in two Trunnions (1) boiled tightly together by a #" Bolt and nut. The Bolt is then passed through the Flanged Plate and is fitted with two nuts locked together, through the Flanged Plate and is fitted with two nuts locked together, so that the wheels can pivot to steer the crane. The Bush Wheel (2) is on a 2" Rod passed through one of the jib supports and through a ½" Reversed Angle Bracket bolted to the support. A length of Cord tied to the Rod is attached to the rear end of the jib, and a Spring Clip and a Washer are used to prevent the Cord sliding off the Rod. The rear section of the jib is made from two $5\frac{1}{2}$ " Flexible Plates joined by 'U'-shaped pieces, each made from two Angle Brackets bolted together. The 'U'-pieces are held by the Bolts (3) and (4).

1.23 MOBILE CRANE

				1 (1)	62	1100	ill Cd				
4	of	No.	2	4	of	No.	35	3	of	No.	11
4	"	,,	5	29	,,	,,	37a	1	,,	"	12
1	,,	,,	10	23	"	"	37b	2	,,	,,	12
4	"	,,	12	2	"	**	38	2	,,	,,	12
2	"	,,	16	1	,,	"	40	2	,,	,,	14
2	"	,,	17	2	,,	,,	48a	2	,,	,,	15
1	,,	,,	19s	1	,,	,,	52	2	,,	,,	18
4	,,	,,	22	1	,,	,, -	57c	17.0			
1	"	,,	24	2	,,	"	90a				
											-





1.25 TRIP HAMMER

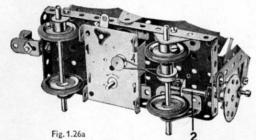


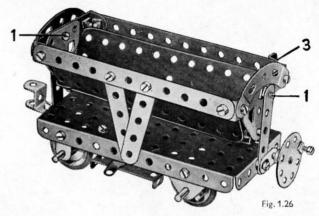
Pai	rts	Req	uired
4	of	No.	2
3	"	"	5
2	"	,,	12
1	"	"	17
1	"	"	19s
4	"	,,	22
1	"	"	24
4	"	,,	35
17	22	"	37a
17	"	"	37b
1	"	,,	48a
1	"	"	52
2	"	"	111c
1	19	**	125
2	,,	"	126
2	"	"	126a
1	**	**	155
1	**	"	189

1.26 SIDE TIPPING WAGON

Parts Required

3	of	No.	2	28	of	No.	37a	1	of	No.	125
4	,,	,,	5	24	,,	,,	37ь	2	,,	,,	126
4	,,	,,	10	3	,,	"	38	2	,,	,,	126a
7	,,	"	12	1	"	,,	40	4	,,	,,	155
2	,,	,,,	16	2	,,	"	48a	2	,,	,,	189
1	"	"	17	1	,,	"	52				
4	**	,,	22	2	,,	,,	90a				1otor
1	"	,,	24	4	,,	,,	111c	(not	inc	luded	in Outfit)



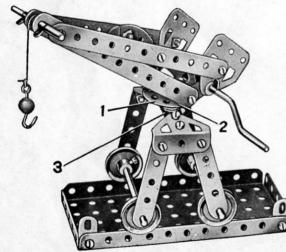


Each of the Bolts (1) is *lock-nutted*. A piece of Cord is fastened to the Rod (2) (Fig. 1.26a) wrapped round it two or three times, and then is taken through the hole in the Flanged Plate above the Rod and secured to the Angle Bracket (3). By turning the Bush Wheel the container is tipped sideways.

1.27 TRAVELLING CRANE

Parts Required

									110	40110								
4	of	No.	2	1	1	of	No.	17	1	20	of	No.	37a	1	1	of	No.	52
4	"	**	5		1	,,	**	19s	1	20	,,	**	37b		1	,,	"	57c
4	"	**	10		4	,,	"	22		4	**	"	38		2	,,	**	90a
2	"	"	12		1	,,	,,	24	1	1	,,	"	40		1	,,	"	111c
2	"	,,	16		4	,,	**	35	1	1	22	**	48a		2	,,	**	126
															2	**	**	1262



The sides of the jib are secured to the Bush Wheel (1) by two Angle Brackets (2), one on each side. A $\frac{3}{8}$ Bolt is passed from the underneath side of Double Angle Strip (3) into the boss of the Bush Wheel (1) and the set screw is then tightened. The Flat Trunnions

The Flat Trunnions at the lower end of the jib support the Crank Handle, which also passes through Fishplates bolted to the Angle Brackets (2) on the Bush Wheel (1). The Cord is fastened to the Crank Handle, and passes over the 2" Rod at the jib head.

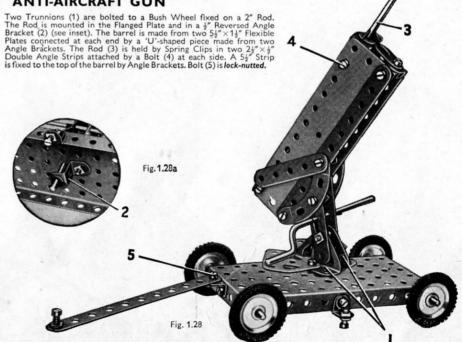
Parts Required 4 of No. 2

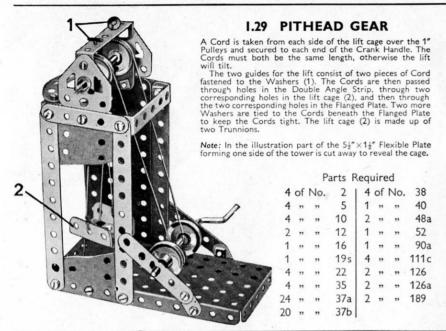
2 " " 16 2 " " 17 1 " " 19s 4 " " 22 1 " " 24 4 " " 35 28 " " 37a 23 " " 37b 1 " " 38 2 " " 48a 1 " " 52 2 " " 90a 2 " " 111c 1 " " 125 2 " " 126

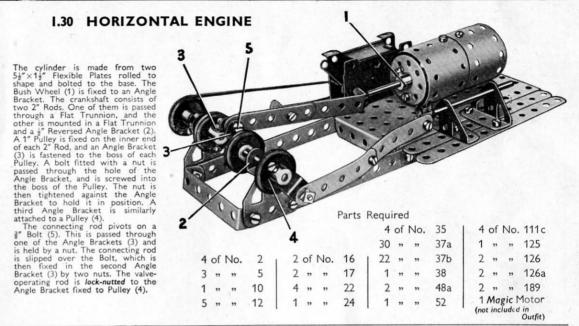
> " 126a " 142c

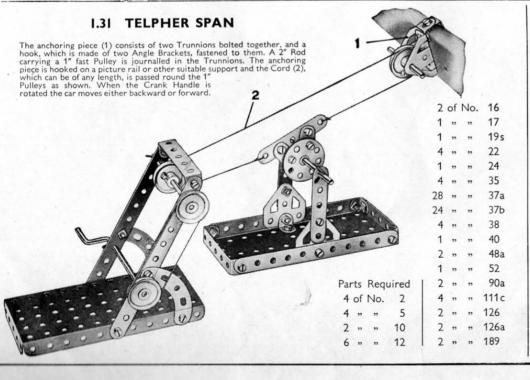
> > 189

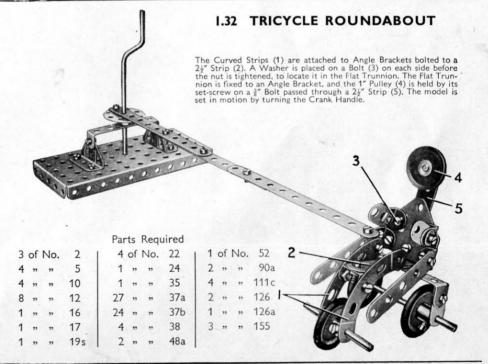
1.28 ANTI-AIRCRAFT GUN











5	400%mm1450mm5045mm4m4m250%mm504400mm04m04m0404040404mm+40m
9a	50454448848004488884040-44404 WEST WEST
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6a	4 u u 4 u u
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PERFORATED STRIPS

No.	No.	No.
1. 121"	1 2a. 4½"	6. 2" 6a. 1½"
1a. 9½"	4. 3	6a. 1½"
No. 1. 12½" 1a. 9½" 1b. 7½" 2. 5½"	No. 2a. 4½" 3. 3½" 4. 3" 5. 2½"	

ANGLE GIRDERS

7. 24½" 7a. 18½" 8. 12½" 8a. 9½"	8b. 7\frac{1}{2}"	1 9c. 3"
7a. 18½"	8b. 7½" 9. 5½" 9a. 4½" 9b. 3½"	9c. 3" 9d. 2½" 9e. 2" 9f. 1½"
8. 12½"	9a. 4½"	9e. 2"
8a. 9½"	9b. 3½"	9f. 1½"







10. Fishplate

I 11. Double Bracket

ANGLE BRACKETS

12. ½"×½" 12a. 1"×1" 12b. 1"×½" 12c. Obtuse, ½"×½"





AXLE RODS

13. 111/	1 15a. 4½"	1 16b. 3"
13a. 8"	15b. 4"	17. 2"
14. 64"	16. 34"	18a. 14"
15. 5"	16a. 2½"	18b. 1"
19g. Crank Har	dle, 34" shaft, with	grip
	ndle, 5" shaft, with	
	dle 34" shaft with	







19a. Spoked Wheel, 3" diam. 20. Flanged Wheel, 1\frac{1}{2}" diam. 20b. Flanged Wheel, \frac{3}{4}" diam.







PULLEYS

19b. 3" diam., with boss and screw 19c. 6" diam., with boss and screw 19c. 6" diam., with boss and screw 20a. 2" diam., with boss and screw 20a. 21. 22. 1½" diam., with boss and screw diam., with boss and screw





PULLEYS

22a. 1" diam., without boss 23. ½" diam., without boss 23a. ½" diam., with boss and screw







26

24. Bush Wheel, 1¾" diam., eight holes 24a. Wheel Disc, 1¾" diam., without boss, eight holes 24b. Bush Wheel, 1¾" diam., six holes 24c. Wheel Disc, 1¾" diam., without boss, six holes PINIONS









GEAR WHEELS

27	11#	diam.	EO.	teeth	
27a.	15"	diam.,	57	teeth	
27Ь.	31,"	diam.,	133	teeth	
27c.	25"	diam.,	95	teeth	
27d.	15"	diam.,	60	teeth	





CONTRATE WHEELS

1½" diam., 50 teeth 29.



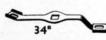






Bevel Gear, 📲 diam., 26 teeth (for use in pairs) Bevel Gear, 🖆 diam., 16 teeth Can only be Bevel Gear, 15 diam., 48 teeth used together Gear Wheel, 1 diam., 2 face, 38 teeth 30c. used together

31. Worm, ½" diam. Spanner





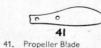


34b. Box Spanner 35. Spring Clip

Screwdriver Screwdriver (longer)

Drift (for levering bolt holes into line)
Nut and Bolt, 32

36a. Screwdri 36c. Drift (for 37. Nut and I 37a. Nut 37b. Bolt, 32 38. Washer 38. Washer 38d. Washer, 3" Hank of Cord





1 43. Tension Spring, 2" long







53

Bent Strip, stepped Double Bent Strip 44.

DOUBLE ANGLE STRIPS 48c. 41"×1" 48d. 51"×1" 48a. 48b. 34









Flanged Sector Plate, 4½" long Perforated Strip, slotted, 5½" long Perforated Strip, slotted, 2" long







57b. Hook, Loaded, large 57b. Hook, Loaded, large 57c. Hook, Loaded, small 58. Spring Cord, 40" length 58a. Coupling Screw for Spring Cord 58b. Hook for Spring Cord 59. Collar, with screw

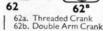


Crank

Windmill Sail













63c. Threaded Coupling 63. Coupling 63b. Strip Coupling 63d. Short Coupling





65 69a. Grub Screw, 12 69b. Grub Screw, 12 7 69c. Grub Screw, 74



79. 79a.

97a.





Flat Plate, $5\frac{1}{2}$ " $\times 2\frac{1}{2}$ " Flat Plate, $2\frac{1}{2}$ " $\times 2\frac{1}{2}$ " Flat Plate, 3" $\times 1\frac{1}{2}$ " 70. 72. 73.

76. Triangular Plate, 2½*
77. Triangular Plate, 1*

81.

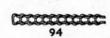


SCREWED RODS

80a. 34" 80b. 41"

CURVED STRIPS

89. 5½" (10" radius) 89a. Stepped, 3" (1¾" radius) 89b. Stepped, 4" (4½" radius) 90. 2½" (2¾" radius) 90a. 5½" (1¾" radius)

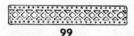




94. Sprocket Chain, 40" length

SPROCKET WHEELS

2" diam., 36 teeth 96. 1" diam., 18 teeth 96a. 3" diam., 14 teeth 95a. 1½" diam., 28 teeth 95b. 3" diam., 56 teeth



BRACED GIRDERS

12½" long 9½" long 7½" long 100. 5½" long 100a. 4½" long long 98. 2½" long 99b.





101. Heald for Loom I 102. Single Bent Strip

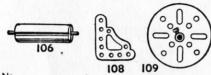


FLAT GIRDERS

103. 5½" long 103a. 9½" long 103b. 12½" long 41" long 103c.

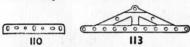
103d. 3½" long 103e. 3" long 103f. 2½" long 103g. 2" long 103h. 1½" long 103k. 7½" long

MECCANO PARTS -



Wood Roller (complete with Rod and two Collars) Corner Gusset

Face Plate, 24" diam.



110. Rack Strip, 31 long 1 110a. Rack Strip, 61 long

BOLTS

111. ½" 111a. ½" 111c. 11

113. Girder Frame







Hinge 115. Threaded Pin

116. Fork Piece, large 116a, Fork Piece, small



118. Hub Disc, 54" diam.





120b. Compression Spring. % long 122. Loaded Sack





Cone Pulley, 1¼", 1" and ¾" diam. Reversed Angle Bracket, 1" Reversed Angle Bracket, ½"







Trunnion Flat Trunnion Bell Crank, with boss





130. 130a. Eccentric, Triple Throw, ‡", \$" and ½" Eccentric, Single Throw, ‡"







133. Corner Bracket, 1½"
133a. Corner Bracket, 1"
134. Crank Shaft, 1" stroke





136. Handrail Support | 136a. Handrail Coupling





137. Wheel Flange

1 138. Ship's Funnel, Raked





Flanged Bracket (right)
Flanged Bracket (left) Universal Coupling







142a. Motor Tyre (to fit 2" diam. rim)
142b. Motor Tyre (to fit 3" diam. rim)
142c. Motor Tyre (to fit 1" diam. rim)
142d. Motor Tyre (to fit 1" diam. rim)
143. Circular Girder, 5½" diam. 143. Circular Gir 144. Dog Clutch





Circular Strip, 7½" diam. overall Circular Plate, 6" diam. overall Circular Plate, 4" diam. overall







Pawl, with Pivot Bolt and nuts

147a. Pawl

147b. Pivot Bolt, with two nuts

147c. Pawl, without boss

147c. Pawl, without boss
148. Ratchet Wheel
151. Single Pulley Block
153. Triple Pulley Block
154a. Corner Angle Bracket, ½" (right-hand)
154b. Corner Angle Bracket, ½" (left-hand)
155. Rubber Ring (for 1" Pulley)







Fan, 2" diam. Channel Bearing, 1½"×1"×½" Girder Bracket, 2"×1"×±"





Boiler, complete, 5" long × 2+s" diam.

Boiler Ends, 2+s" diam. × 3"

Sleeve Piece, 1 s" long × +s" diam.

Chimney Adaptor, 3" diam. × s" high







165. Swivel Bearing
166. End Bearing
167b. Flanged Ring, 9‡" diam.
168. Ball Thrust Bearing, 4" diam.
168a. Ball Thrust Race, flanged disc, 3‡" diam.
168b. Ball Thrust Race, toothed disc, 4" diam.
168c. Ball Cage, 3‡" diam., complete with balls
168d. Ball, ‡" diam.





171. Socket Coupling 173a. Adaptor for Screwed Rod Flexible Coupling Unit Anchoring Spring for Cord





Rod Socket Gear Ring, 34" diam. (133 ext. teeth, 95 int.)





No. 185. Steering Wheel, 13" diam.

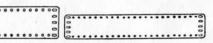
DRIVING BANDS

186a. 186b. 10" (light)

192

186c. 10" (heavy) 186d. 15" (heavy) 186e, 20" (heavy)

187. Road Wheel, 2½" diam. 187a. Conical Disc, 1½" diam.



FLEXIBLE PLATES 190. 24" × 24". | 191. 44" × 24" 190a. 34" × 24" | 192. 54" × 24"

STRIP PLATES

196. 94"×24"

1 197. 121"×21"

197







Hinged Flat Plate, $4\underline{J}'' \times 2\underline{J}''$ Curved Plate, 'U'-section, $2\underline{J}'' \times 2\underline{J}'' \times \underline{J}'''$ radius Curved Plate, $2\underline{J}'' \times 2\underline{J}'' \times 1 + \underline{J}'''$ radius







211a. Helical Gear, 🐙 Can only be used 211b. Helical Gear, 1½ together 212. Rod and Strip Connector 212a. Rod and Strip Connector, right-angle

213. Rod Connector 213a. Three-way Rod Connector 213b. Three-way Rod Connector with boss Rod Connector







Semi-circular Plate, 24"

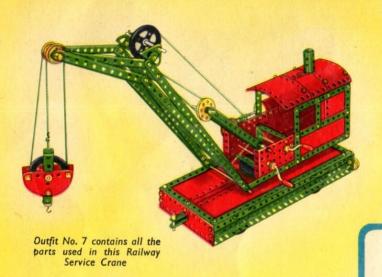
Formed Slotted Strip, 3" Cylinder, 2½" long, 1½" diam.

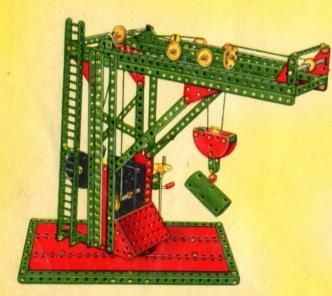
TRIANGULAR FLEXIBLE PLATES

223. 2½"×2½" 224. 3½"×1½"

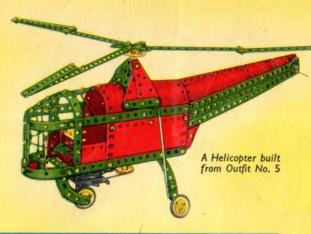
230. 4" Rod with Keyway Key Bolt

A SELECTION OF FASCINATING MODELS FROM THE MECCANO INSTRUCTIONS BOOKS





This Forge Crane is another of the fine working models built with Outfit No. 6



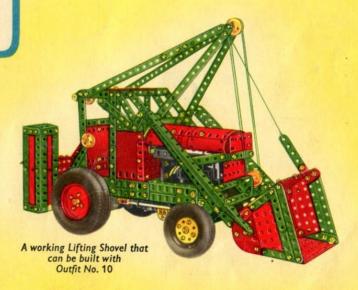
HOW TO CONTINUE

When you have built all the models shown in this Book of Instructions, you will be keen to build others bigger and more elaborate. Your next step, therefore, is to purchase the appropriate Accessory Outfit containing all the parts required to convert your present Outfit into the next larger complete Outfit, as explained on page 2 of cover. You will then be able to build a new range of fascinating models.

If you prefer to do so, you can build up and develop your present Outfit quite easily by adding various parts to it from time to time. The model-building possibilities of the Meccano System are unlimited, and the more Meccano parts you have, the finer and more varied the models you will be able to build. When you have built all the models shown in this Book of



This Military Tank is one of the attractive models that can be built with Outfit No. 8



All the parts for this Fork Lift Truck are contained in Outfit No. 6