



MECCANO

MAGAZINE

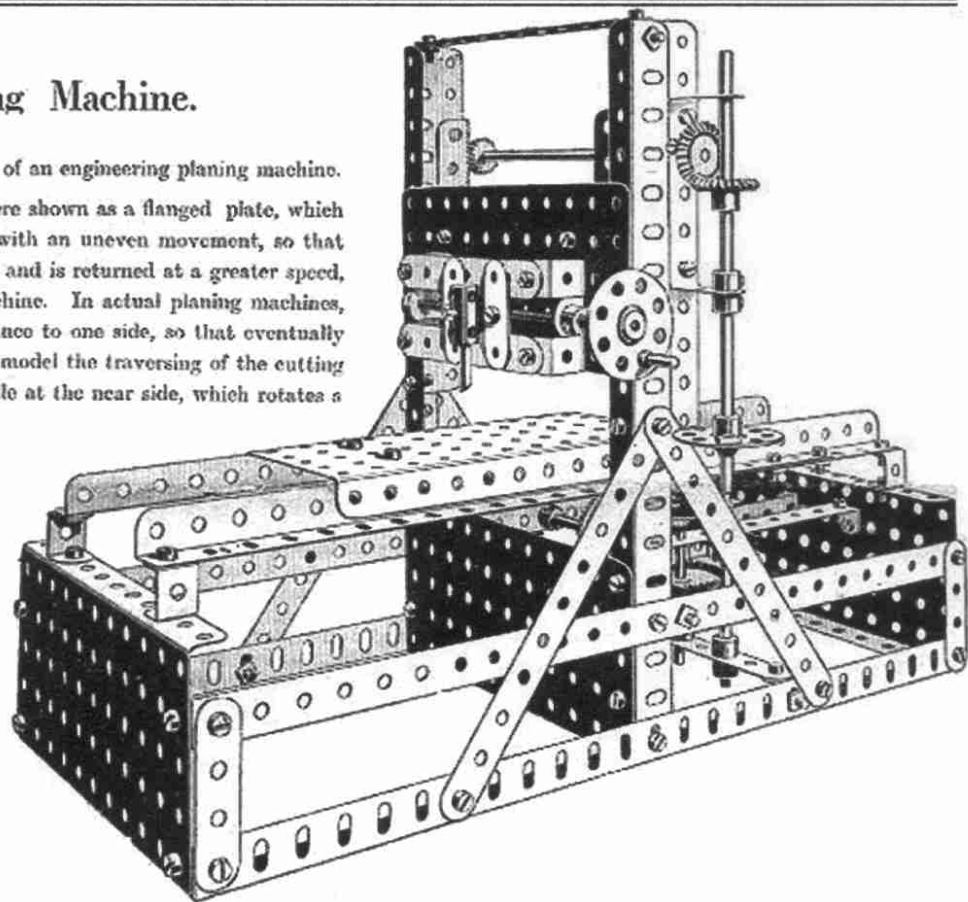
PRICE
1d

TO HELP MECCANO BOYS TO HAVE MORE
FUN THAN OTHER BOYS

A Meccano Planing Machine.

The illustration shows a very interesting model of an engineering planing machine.

The work to be planed is secured on a table, here shown as a flanged plate, which is caused to reciprocate beneath a cutting tool, with an uneven movement, so that during the cutting stroke the work moves slowly, and is returned at a greater speed, thus economising time in the running of the machine. In actual planing machines, after each cut the tool is traversed a slight distance to one side, so that eventually the whole surface of the work is planed. In our model the traversing of the cutting tool is obtained by turning the bush-wheel handle at the rear side, which rotates a threaded rod, engaging a threaded bush secured at the back of the cutting tool. In order to bring the cutting tool down on to the work, the mechanism shown at the side is provided, consisting of a vertical rod at the lower end of which is a bush-wheel handle, the upper end carrying a bevel gear, engaging another bevel gear on a rod carrying two pinions, which engage two racks, secured to the rear of the perforated plate, from which the cutting tool is carried. Consequently by rotating the handle, the pinions cause the racks to rise or fall, and bring the cutting tool down on to the work, or raise it therefrom.



Editorial.

Big Competition closed.

Our £250 Competition closed on April 15th so far as British entries were concerned, and the examination and adjudication of the models is proceeding as rapidly as possible. I hope to print a full list of the awards in our next issue.

Our Story Competition.

I am more than gratified at the response to this Competition. Stories from boys of all ages are coming in daily, and it is quite evident that this is going to be one of the most popular competitions we have ever started. The more stories the merrier, boys! Send yours in, and if it is a good one you will not only receive a good prize, but will also see it published in these pages.

Our New Train Factory.

Since our last issue the new Meccano Factory, for manufacturing Clockwork Trains in, has been completed and will be in full working order shortly. New Trains, Coaches, Trucks, Rails, Signals, Stations, etc., will come from this factory in great variety, and you boys should look out for the wonderful Hornby Train system during next winter. It is certainly the most efficient and attractive system yet produced.

The Meccano Guild.

The Secretary of the Guild has had a very busy winter attending to the wants of the many prosperous Meccano Clubs all over the country. The growth of this fine movement has been nothing short of remarkable, and many thousands of Meccano boys are meeting regularly each week and having good times. The movement is even extending to the Continent and to the Colonies, where Meccano

boys are forming Clubs in the big centres. It is a pleasure to read the letters which come from members of these Clubs.

Meccano Boys as Editors.

I am sure it would surprise my readers if they knew the number of boys' Magazines which are being produced in connection with Meccano Clubs. They all contain much interesting matter, and many of them are well produced, mostly with the aid of some form of duplicating machine. The boy Editors and contributors get much pleasure from writing and making up these Magazines, and I am firmly convinced that the experience and knowledge which they are gaining in this way will prove most useful to them later.

Better Photographs wanted.

Let me remind my readers that I am always glad to receive photographs possessing

Meccano interest, and to pay 2/6 for any which I may use. The photographs may be of themselves, their models, local engineering structures which might form the basis of new Meccano models, or in fact anything of interest to readers of the M.M. I have already received a goodly number, some of which I shall use; but many of the photographs are poor in quality, indistinct, and not suitable for reproduction. The photographs must be clear and sharp, otherwise I am not able to use them.

The Editor.

The New Meccano Catalogue.



This beautiful new catalogue should be in the hands of every Meccano boy.

Besides illustrating and describing each outfit and explaining the simplicity and beauty of the Meccano system, it gives full particulars of the new Electrical Accessory Outfit, Meccano Clockwork and Electric Motors, the Hornby Clockwork Train System, which is making such a deep impression throughout the country; the Tin Printed Clockwork Trains and Vertical Steam Engines. It also contains two full pages of illustrations of Prize-winning Models in the Big Meccano Competitions, and a fully illustrated list of the entire range of Meccano parts, including the new and valuable ones which have been recently added.

The demand for "Meccano Products" following the announcement in our previous issues has been very heavy indeed, but there are still thousands of Magazine readers who have not taken advantage of this splendid offer.

We wish every reader of the "Meccano Magazine" to possess one of these beautiful booklets. A copy will be sent FREE on receipt of your postcard. Write to-day.

How to get the Meccano Magazine regularly.

The Meccano Magazine is now sold by most of the regular Meccano dealers but in order to prevent disappointment you should place an order with your dealer for a copy of each issue to be reserved for you. The price of each issue is 1d. If you experience difficulty we will mail you a copy regularly on receipt of 6d. for the next six issues, or 1/- for the next twelve.

Life Story of Meccano.

BY FRANK HORNBY.

(Continued.)

A portion of our Model Room is fitted up as a photographic studio with all the necessary backgrounds, screens, reflectors, etc. I think some of you boys would be very much surprised if you saw the number of photographs taken in our studios in the course of a year. As each newly-invented model is finally completed it is first photographed in its complete state, and after that, the necessary sectional views of any intricate pieces of mechanism in the model are also taken. Photographing Meccano models is quite an intricate business at times, and a considerable amount of experience and judgment are necessary in deciding on the best view point, and the correct exposure. The great majority of the illustrations in the Meccano Books of Instructions, in our big range of literature, and in our advertisements, are from photographs taken in our own studios. Our Photographic Department is always busy, and in order to expedite its work we have a fully-equipped Dark Room, for developing plates, and making prints from the negatives in various processes. All our photos are taken with Anastigmat lenses, and mostly on 12 x 10 plates. The original photographs taken are always much bigger than the final illustrations in our Books of Instructions and in the "Meccano Magazine," as this enables us to get finer and clearer results. The process of preparing a block from one of our negatives is not altogether mechanical, a good deal being left to the skill and judgment of clever artists. A good print is first taken on gas-light paper from the negative and mounted on a strong board. An experienced artist then draws the lines on the actual photograph itself, as they will appear in the finished illustration, emphasising certain portions of the mechanism in order to clearly show the method of construction and giving light and shade to the model where necessary. The artist uses a special kind of ink for this work, and when he has finished his work the whole of the photographic portion of the print is bleached out by a special chemical process, leaving nothing but the artist's work on the print. The block for making the illustrations for our Manuals or other literature is then made from the final work of the artist.

The mention of blocks and other illustrations brings me to a Department whose work you are all familiar with, namely, our Advertising Department. One of the main reasons why Meccano has been so successful is that we have made its merits known, emphasised them, and insisted upon them largely through the medium of the public press in this and all civilised countries, for the past twenty years.

Advertising is a very wonderful power, and it is very largely through this power that we have been able to bring to the knowledge of so many of you boys, and your parents, the wonderful pleasures and merits of the Meccano hobby. Now advertising can be done well or it can be done badly, and I pride myself on the fact that no advertising in modern times has been more successful than our own. We have made it our business to bring home the merits of the Meccano hobby to every boy in this country, and I think I can safely claim that we have done this. Our advertising has always been characterised by simplicity and great clearness in demonstrating the fun, pleasure and instructions to be obtained from Meccano model building.



The Meccano Boy.

Many years ago we created a Meccano boy—a sturdy, happy-faced young man with joy and fun oozing from every feature and limb. He has always been dressed in the same way in the characteristic Meccano check jersey, and he is always enjoying himself. I am sure that any of you boys would recognise his merry face anywhere, and that you will agree that our advertisements would now seem incomplete without him. I can assure you that he was not created without a great deal of thought, and a good many sketches and drawings were made before we could decide upon how old we ought to make him, how we should dress him, and even how his hair should be parted. Finally, a very clever young lady artist was able to understand just what we wanted and drew for us the Meccano boy as you now know him. She has since drawn him in black and white and in colours, in all kinds of poses, building and playing with Meccano models, and always with the same happy face, and wearing his characteristic jersey. We have sent him abroad to every civilised country in the world, where his bright eager figure is now appearing in the best magazines and newspapers, stimulating boys of every nationality to taste the joys of Meccanoland. The reason for his great success is that he is just a typical boy, a straight, sturdy fellow whom every other boy would like to have for a chum.

Like Peter Pan, and like Meccano itself, he will never grow up, but will always remain young, happy and healthy, always pointing the way to new fun and happier hours.

(To be continued.)

How to join Meccano Sprocket Chain.



We have often been asked by boys to suggest the best method of joining or separating the Meccano Sprocket Chain, and for their benefit we are illustrating the best type of pliers to use for this work. No difficulty should be experienced if these sharp pointed pliers are used, and they may be obtained at any good ironmonger's establishment.

Suggestions by Meccano Boys.

This column is reserved for dealing with suggestions sent in by Meccano users for new parts, new models, and new ways of making Meccano model-building attractive. We are always glad to hear from any Meccano boy who has an idea which he considers will be useful to the Meccano system. Many correspondents have been replied to direct as we have not sufficient space to deal with them all here.

S. E. Sadler, South Shields. We do not see what advantage there would be in making a hole in the centre of the sleepers to connect. The lines for the Hornby trains are now being fitted with a locking device, and there would therefore be no advantage in making a hole in the centre of the sleepers to connect the lines as you suggest.

E. Wall, Wimbledon. We hope, later on, to introduce a flanged disc which we think will suit your requirements. When this is ready it will be announced in the "Meccano Magazine."

E. H. Pittman. We have had in mind for some little time the introduction of thin spring Meccano strips, which, after being bent, would resume their natural straightness, but up to the present we have not found it expedient to include them in the Meccano parts. We have not, however, abandoned the idea.

F. G. Wilton, Westminster. A tank engine is now under consideration, and it will be duly announced when ready.

F. N. Hamilton, Whitstable. We do not think it would be desirable to introduce strips specially bent for definite models as this would, to some extent, detract from their interchangeability. We have, however, in mind the introduction of a simple device for bending strips and straightening them again.

There are several ways of securing a cord to the winding handle of a crane: one is by passing the end of the cord two or three times around the centre of the crank handle, and then tying it tightly. Another is to use a collar and set screw, and tie the end of the cord to the head of the screw. The crank handle is weakened by boring a hole through it.

Jas. Spencer, Leith. We are at present engaged on an eccentric, and when this is ready it will be announced in these columns. It is doubtful whether the other parts you suggest would have sufficient interchangeable value.

A. M. Watson, Hampstead. Your suggestion to introduce special parts for motors is not consistent with the Meccano principle of interchangeability. We already have a working model of a motor chassis made with Meccano parts, particulars of which will be published shortly.

We shall consider later the introduction of a larger bevel wheel giving a ratio of 2 to 1.

G. Raahauge, Hull. We illustrate a variable resistance in our Electric Manual to be used in connection with our 1-volt motor.

Ralph Perry, Ramsgate. Sends us a very interesting suggestion for propelling small models by the use of twisted elastic, but we regret that this is not an article we could include with Meccano.

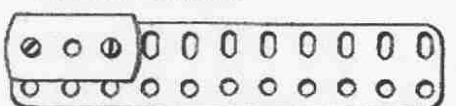
Norman Gobey, Croydon. We sell rails in 1" and 2" radius. It would not be practicable to have other sizes at present.

Ian Macnab, Seaforth. Your suggestion to issue a small manual containing a selection of models to be used in connection with the Hornby train outfits is an interesting one, but we doubt whether it would be expedient to issue such a manual at present. There are several models in our existing manuals which could be used for this purpose.

John McLaren, Dundee. We have no doubt that your suggestion of a 1" flat angle strip would have many uses, and it will receive consideration.

C. West, South Bermondsey. We have decided to issue an eccentric to our list of parts, and when this is ready it will be announced in the "Meccano Magazine."

Ashley, Pendlebury. We consider your suggestion of the use of old safety-razor blades attached to Meccano strips for paper cutting and cardboard modelling a very practical one. We have already had an example of this submitted to us, which we illustrate.



This, we think, is the most useful form; but if any of our readers have better suggestions to make we shall be glad to hear from them.

A. K. French, Streatham Hill. The use of spring fasteners for securing strips together has already had our consideration, but after careful thought we have come to the conclusion that they would not be suitable for model building.

E. Dudley Reeves, Birkenhead. We have some doubt regarding the utility of the crank you suggest, formed of a piece of Meccano rod, as we do not see that anything but a strip could be used as a crank arm in connection with it. If you could give us some examples of its use we would be glad to give the matter further consideration.

P. Baynes, Finsbury Park. We do not think there would be any advantage over our existing girder strips for the use you suggest. We think your purpose would be better served by using ordinary railway lines.

Frank Smith, Blacker Hill. Your idea for making a Dynamo with Meccano parts is very ingenious, but we doubt whether the result would be satisfactory. If you succeed we shall be very glad to hear from you.

L. A. Hollis, Wallington. We thank you for pointing out the irregularity in our leaflet, which we shall put right. Outfits from one to three only, contain a manual which illustrates the models which may be made by those outfits, but 3A and the following complete outfits contain a full manual. If you obtain a No. 4 Outfit, a full manual will be included with it.

We propose very shortly to issue special instructions for making the motor chassis, and when this is ready it will be announced in the "Meccano Magazine." We have recently made the double bracket narrower, as we have found from experience that this is the more useful size. For example, in making a universal joint, the fit is much better. We shall be glad to explain the reversing mechanism if you will kindly let us know the model you saw working. Your suggestion for a Meccano Exhibition to be held in London is very complimentary, but we endeavour to do this through the dealers who handle our goods, and the medium of our Magazine.

E. I. F. Betts, Weston-super-Mare. We have just included in the Meccano parts a curved-rack segment, four of which bolted to a face plate form a 3-inch gear wheel such as you require, and capable of engaging a 1" pinion.

H. Matthews, Shaftesbury. We are doubtful whether the helical or twisted gears you suggest could be usefully employed in Meccano models. However, we shall keep your suggestion before us for further consideration.

Walter Southworth, New Brighton. You are anticipating us, Walter, in suggesting an additional Inventor's Outfit to contain all the new parts recently introduced. We propose doing this very shortly, and its introduction will be notified in the "Meccano Magazine." The new manual you refer to is now actively in course of preparation, and will be issued as soon as possible.

Clifford Hill, Twickenham. See answer to H. Matthews.

I. Norman Nichols, Wantage. We propose to introduce a flanged disc shortly which may be used for tractors. For the present we would suggest that you use girder strips similar to the illustration.



H. Bradley, Acomb. The boiler which we use for the Hornby engines is adaptable to the Meccano standard holes—probably one of these might suit your purpose.

I. N. C. Eggleston, Newcastle-on-Tyne. We have carefully examined the frame plates and flat sector plate, and would like you to write us again suggesting some of the uses for these.

H. Brand, East Ham. Our clockwork motor is designed to be used in a variety of ways, and we think in reducing it to the dimensions you suggest it would impair its application.

Horace W. Daniels, Worcester. We have not thought it necessary to introduce a compression spring as our present tension spring may be drawn out and cut to any length which may be required.

David H. Wilkins, Bourton-on-the-Water. We already have in hand T and right-angle flat strips, and they will be available shortly. We think you will find our face plate will serve the purpose of your suggested hexagonal centre piece.

I. T. Whitehead, Bedford. We appreciate your suggestion for a coupling to take a threaded rod at one end and a plain rod at the other to preserve alignment and avoid damage to the thread of the rod, and we may be able to adopt this later on.

V. & B. Sadler, Adelaide, S. Australia. We must compliment you both on the thought and care you have exercised in your suggestions, which are mainly of a geometrical nature. Our chief object is to introduce parts which have an interchangeable purpose for the construction of Meccano models. We have already introduced Curved Angle Strips, and later on we shall introduce discs, but we must be sure they have a definite purpose and be able to explain their application.

A. E. Marsh, St. Ives. We already illustrate how to make an Electric Loco in our Electrical Manual. Later on we may introduce one on the lines of our Clockwork Trains, but of the correct pattern.

Jack Shaw, Manchester. We cannot explain how to make a wheel 28" diameter with a flat rim without the heads of bolts protruding, as it is essential to fasten the rim with nuts and bolts to the side strips. Spring Cord is used for transmission drives from one pulley wheel to another. We have in preparation a leaflet giving instructions how to make the new Meccano Chassis and this will be ready shortly.

C. E. Wetworth. We don't quite understand your suggestion for an axle-guard. We have already introduced a trunion which may be used as a bearing for an axle, and perhaps this would help you out of your difficulty.

W. A. Fraser, Harnay Oakney. A 1" Pinion is already included in our list and we propose shortly to include a 3" fly wheel.

W. Furnston, Manchester. We intend to introduce a flanged disc later and this will be announced when ready.

Dumford P. Smith, P.Q. Canada. We already have bevel wheels in our list and if you cannot get them from your dealer let us know.

A. K. Woodland, Bristol. Springs for Motor Chassis may be made by slightly curving and super-imposing and bolting together 5 1/2", 3 1/2" and 2 1/2" Strips.

I. G. W. Hirst. Your suggestion for a Rectangular Plate with a flange on one side only is having our consideration.

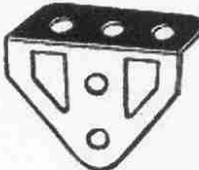
L. Oates. We think a steam turbine such as you suggest would be dangerous. We hope to give consideration to this matter later.

D. Lionel Day, Heywood. We should be glad to know whether the turbine which you suggest is intended to be driven by water. Perhaps you will send us the turbine you have made so that we may inspect it.

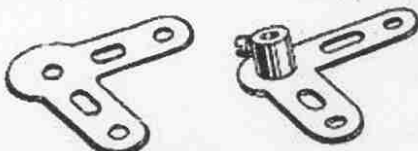
New Meccano Parts.



124.	Reversed Angle Brackets, 1" ...	1 doz.	0 10
125.	" " " " 1/2" ...	1 doz.	0 7



126.	Transunion ...	each	0 6
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127.	Simple Bell Cranks ...	each	0 3
128.	Boss Bell Cranks ...	"	0 6

The Meccano Guild



Member's Badge



Leader's Badge

A Fellowship of Meccano Boys

The objects of the Meccano Guild are:

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

The Meccano Guild has been formed to bring Meccano boys more closely together, and to make them feel that they are all members of a great brotherhood of boys, trying to help each other and themselves to get the very best out of life.

Every Meccano boy can join the Guild as an individual member, and so share in the privileges of membership. As soon as possible he should attach himself to a local Meccano Club, or if there is not one already in existence, he should take steps to form one with the assistance of his Meccano boy friends.

The Secretary of the Guild is always very glad to help with the formation of new Meccano Clubs, and to provide literature which will give all the necessary information.

Every new Meccano boy should immediately get to know all about the Guild in order that he may get the full pleasure from Meccano model-building, and the companionship and friendship of hundreds of thousands other boys who are glad to welcome him as a friend.

Forms of application and all other information will be furnished by The Secretary, Meccano Guild Headquarters, Old Swan, Liverpool. Each member on joining is furnished with the official member's badge, and a beautiful Certificate of membership ready for framing.

Guild Notes.

BY the SECRETARY.

We have now come to the end of a very excellent Winter Session, and I want to first put on record my appreciation and admiration for the capable and enthusiastic way in which Meccano Club Leaders, Secretaries, and other officials have conducted their Club work. It has been a pleasure to me to read the Club reports and to note the maintained enthusiasm of the members, and the success which has crowned the efforts of all those who have assisted in arranging pleasurable evenings, Exhibitions, Concerts, Competitions, etc.

It is unfortunate that I have not sufficient space at my disposal to enable me to publish the Club Leaders' and Secretaries' reports in full, for I am perfectly sure that they would be a great inspiration and guidance to the newer Clubs.

It is also very gratifying to find that the great majority of the Clubs are self-supporting, and in fact many of them finished up the Session with a handsome balance on the right side.

Although the summer is now upon us the activities of Meccano Clubs have by no means ceased. Camera Clubs, Cricket Clubs, Rambling Clubs, etc., have been formed, and outings have been arranged right through the summer. There is a wonderful amount of enjoyment in this form of Club work, and of course it goes without saying that it need not be expensive. It also keeps the Club spirit alive, and I strongly urge all Leaders and Secretaries to take as keen an interest in the Summer, as in the Winter Session.

Several Meccano Clubs now run their own Club Magazine, which they issue about once a month. I have been very interested in reading them, and each number proves to be better than the last. They are inexpensively produced by some form of duplicating machine, and a limited number is printed and circulated amongst the members. In some instances a sample copy only is printed, and each member reads it in turn.

I hope to see more of these Magazines in the future, and shall be pleased to give every assistance I can to Clubs wishing to start one.

Our Correspondence Club continues to be much appreciated, and has been the means of starting many close friendships. Any member who is interested in corresponding with another Meccano boy should write to me for full particulars of the Guild Correspondence Club.



I have been very glad indeed to see a very notable increase in the number of aspirants for the Guild Medallions, for meritorious Club work, during the last session, and I now give a list of those which have been awarded. All the lectures mentioned have been sent to me, and I consider them of great excellence. They could not have been compiled without much research and thought, and that they proved acceptable to the Clubs before whom they were read is certain.

From the Club Reports it appears that a large number of boys have prepared and given lectures to their fellow-members, but as these have not been submitted to Headquarters, no awards can be made for them.

I believe this to be one of the most valuable, interesting and helpful sides to the activities of Meccano Clubs, and I shall do everything in my power to encourage it further in the Winter Sessions to come.

LECTURES.

S. A. G. Bone (omitted last session), "Holy Trinity M.C."

Lecture: "Walks to the North of London."

W. Stretton, "Holy Trinity M.C."

Lecture: "Ships and Sea-faring."

C. Jones, "Small Heath M.C."

Lecture: "Steam and Steam Engines."

L. Molland, "St. Thomas (Exeter) M.C."

Lecture: "Modern Methods of Salvage."

J. Dawson, "Gedling M.C."

Lecture: "Railways."

J. Paynton, "St. Mary with St. Gabriel M.C."

Lecture: "Lantern Demonstration."

J. Williams, "South Kirkby M.C."

Lecture: "Steamships."

SPECIALLY GOOD WORK.

L. Valkering, "Leicester M.C."
D. E. Stretton, "Holy Trinity M.C."
Roy Power, "Cardiff Y.M.C.A. M.C."
F. Ibbotson, "Merthyr M.C."
W. A. Bassett, "Hildenborough M.C."
N. Strickland, "Hough Green M.C."
F. W. Whitelouse, "Dunley M.C."
F. Stoneman, "St. Thomas (Exeter) M.C."
H. Manning, "Rushton M.C."
J. Dalton, "Newtown M.C."
G. Holme, "Thornton Heath."
J. Morrison, "Leith M.C."
— Browning, "Mirkfield M.C."
J. Hughes, "Church of Christ S.S. M.C."
A. Hale, "St. Ceid's M.C."



The Recruiting Campaign which ran through the last two Winter Sessions was remarkably successful, and has been the means of adding many thousands of new recruits to the Meccano Guild. To those who have worked so hard in the interests of the Guild I tender my best thanks, and I offer my congratulations to those fortunate ones who were the recipients of the Recruiting Medallions. The Special Gold Medallion has been awarded to Master G. E. Smith, 5, Kilmartin Avenue, Norbury, London, S.W.16, who secured the largest number of recruits, and a Silver Medallion has been awarded to Master John Lawson, 37, Regent Street, Hutton-le-Hole, who secured the second largest number.

Let me remind you that the Recruiting Campaign is being continued until December 31st next, and that each member who secures three new recruits will receive a handsome Medallion. Recruiting Forms may be had on application, and each member who secures a recruit should write his own name and address on the back of the form used.

I congratulate you on the advances which Meccano is making.

My only excuse for all this trouble I am giving you is an enthusiasm for Meccano, which you are entirely responsible for, and for which you must pay the penalty.

Wishing Meccano every success.

I remain,

Yours truly,

JOHN WHITEHEAD

A Parent's Tribute to Meccano.

DEAR MR. EDITOR,

May the Mother of two Meccano devotees send a small contribution to your Magazine? Meccano makes them spend many a happy hour through hours of illness as well as health.

"The way was long, the wind was cold,
The rider was but ten years old.
In good fresh air he biked all day.
His youthful thoughts had their full sway—
Meccano."

For well-a-day his health had fled,
Pneumonia laid him low in bed,
And he—exempt from schoolboy lore,
Over a Magazine would pore—
Meccano.

His mother marked his thoughtful look,
Preoccupied his meals he took,
She bade her boy his secret tell.
He answered her, "I'm really well,
I'm planning out a Helter Skelter
in Meccano."

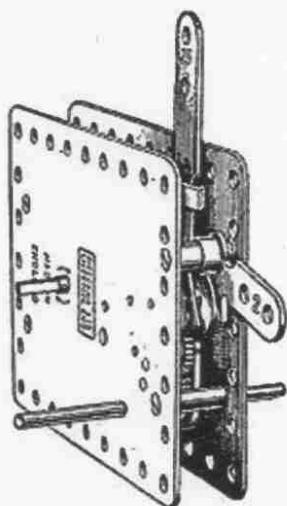
For when you're sick, and when you're sad,
And when you're well, and when you're glad,
There's nothing so allures a boy
As nuts and screws—this is no toy—
But it's Meccano!

With all good wishes for your splendid scheme.

Yours sincerely,

JANETTE B. ROWLAND.

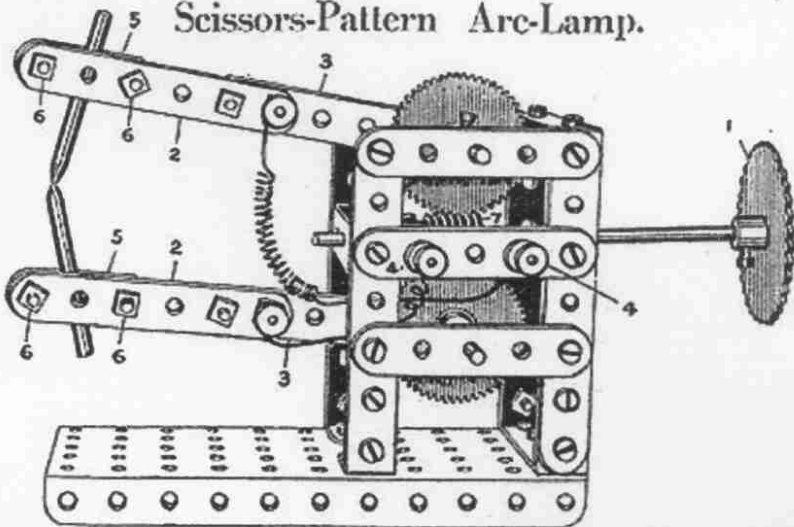
The Meccano Clockwork Motor.



For some little time past the demand for these excellent motors has been greater than the supply and many Meccano boys have been disappointed in not being able to obtain one. We are now manufacturing them in greater numbers, and are able to fill all orders immediately. We have made improvements to the mechanism, and it is now a wonderfully smooth-running and reliable motor. It has stopping, starting and reversing levers, and it is designed to build into and operate most of the Meccano Working Models.

Price - - 12/6

Scissors-Pattern Arc-Lamp.



In our last issue we illustrated an experimental arc-light designed by a user of Meccano, and this has aroused a great deal of interest amongst our readers. We now illustrate a simpler type of light which any boy can put together with Meccano parts.

Each carbon is held in position between a $1\frac{1}{2}$ " strip 5 and a 3" strip bolted together by means of $\frac{1}{2}$ " bolts 6. The 3" strips are bolted to, but insulated from, the $3\frac{1}{2}$ " strips 3.

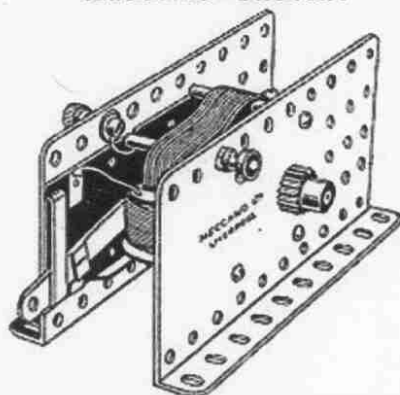
Insulated wires are taken from the carbon holders to two insulated terminals on the side of the lamp 4.

The adjustment of the carbons is effected

by turning the sprocket wheel 1. The worm wheel is thus made to act on the two 50-teeth gear wheels to which the $3\frac{1}{2}$ " strips 3 are bolted.

Cored carbon is best for the purpose, and each piece should be 3" long and 5 mm. in diameter. When an 8-volt accumulator is connected to the two insulated terminals, and the points of the carbon brought close together they will become incandescent. A much better effect may be obtained by using a 40-volt supply, as the carbons may be separated, thus producing a brighter light. If alternating current be used the voltage may be reduced to 30.

The New Meccano Electric Motor.



The Meccano Electric Motor has been re-designed, and several new and useful features have been added. It takes 4 volts, and it may be operated by accumulators, dry batteries, or direct from town supply if a suitable transformer is used.

The height of the side plates has been increased, permitting the use of extra gearing.

The standard Meccano rod is used for the armature shaft, and any of the Meccano gear or pinion wheels may be used to drive the gears. If a direct drive is required, any of the Meccano pulley wheels may be fixed to the armature shaft.

The reversing switch gives improved facilities for gear control. The switch handle projects from the rear of the motor, and is pierced with the Meccano standard hole. A strip may be bolted to the switch handle or a rod passed through the hole, allowing the switch to be operated from any part of the model.

Suitably geared, this motor has very great lifting power. The holes in the side plates and flanges are the standard equidistant Meccano perforations, enabling the motor to be connected to Meccano perforated plates, strips, or angle girders, with the regular Meccano nuts and bolts.

The Meccano Electric Motor is supplied, as shown, without gearing, but with a $\frac{1}{2}$ " pinion on the driving shaft.

Price - - 17/6

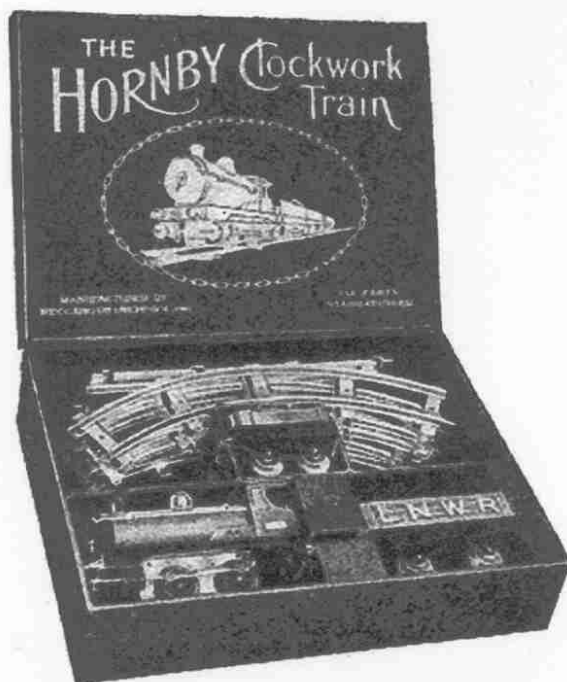
Meccano Cartons.

We are frequently asked to quote prices of empty Meccano Cartons by boys who have damaged their own, or who, having purchased an Accessory Outfit, require a single carton or Wood Cabinet to hold all their parts. We, therefore, give below a full list of both Cartons and Cabinets with prices.

Cartons.				Postage.
No. 0	...	...	1/-	6d.
No. 1	...	...	1/6	8d.
No. 2	...	...	1/9	9d.
No. 3	...	...	2/9	9d.
No. 4	...	...	3/6	1/-
No. 5	...	...	5/6	1/-
No. 0a	...	...	1/-	4d.
No. 1a	...	...	1/3	6d.
No. 2a	...	...	1/6	6d.
No. 3a	...	...	1/6	6d.
No. 4a	...	...	1/9	9d.
No. 5a	...	...	4/6	1/-
"A" Inventor's	...	...	1/6	6d.
"B" Inventor's	...	...	1/6	6d.

Wood Cabinets (with lock and key)

	Postage.
No. 5	42/- 1/3
No. 5a	40/- 1/6
No. 6	70/- 1/6



The above is a reproduction of the No. 1 Hornby Train Set in its new presentation. The box is covered in brown leather paper with the lettering and train beautifully embossed in gold. There is a special shaped compartment for Engine, Tender and Trucks, each of which is held rigidly. The box thus provides a safe storage for the set, and complete freedom from accidental damage when the train is not in use.

THE HORNBY CLOCKWORK TRAIN

Boys! a new era in Clockwork Trains has begun. The Hornby Train is first of all a beautiful piece of workmanship, the smartest-looking and the smoothest-running Clockwork Train you ever saw; delightful to handle and to watch as it dashes busily round its track.

But the Hornby Train has also a most valuable and remarkable new feature. It can be taken entirely to pieces and rebuilt, just like a Meccano model. It is really an extension of the Meccano principle, all the parts being standardised and interchangeable. There is just as much fun taking the Engine, Tender, and Trucks to pieces and rebuilding them as there is in playing with them.

If one of the parts is damaged or lost you can replace it with a new one and fit it yourself. The Hornby Train lasts for ever.

Supplied in Gauge O in different colours to represent the L. & N.W., G.N., Midland, Caledonian, and L.B. & S.C. railway systems. Each Engine is fitted with Reversing Gear, Brakes, and Regulators.

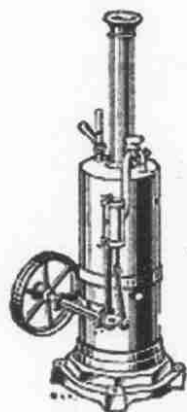
Perfect Mechanism

Beautiful Finish

Standardised Parts

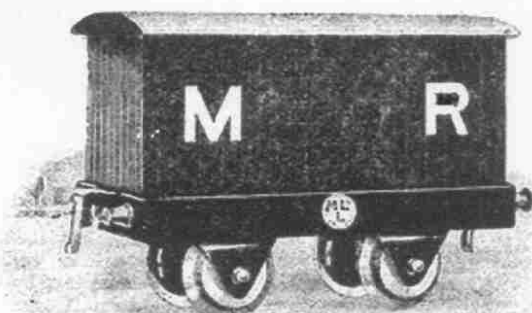
Complete Set		including Engine, Tender, Goods Wagon, and Set of Rails including a 2ft. circle and two straights.		30/-
Engines	-	18/6 each	Wagons	- 4/6 each
Tenders	-	4/6 each	Rails (straight or curve)	6/- doz.

Vertical Steam Engine



A finely finished Steam Engine, superior workmanship; each one carefully tested. Oxidized brass boiler; stationary cylinder, and eccentric reversing gear; whistle, spring safety valve, etc., cast base; fittings nickelled and finely polished. Dimensions of boiler, 2½ in. diameter by 3½ in. long.

Price - 27/6 each



Covered Luggage Van

Price - 6/-

This is a new addition to the Hornby Train Set. It measures 6 in. long by 3½ in. high, and is embossed and beautifully enamelled in colours.

Like the Hornby Train it is built of standardised parts, and may be taken to pieces and rebuilt. Any damaged part may be renewed at any time.

May be purchased with M.R., L.N.W.R., or G.N. initials.

MECCANO



Our Mail Bag.

The Editor has a little talk in this column with his Meccano boys. Whether he has space to reply to them all here or not, he is always glad to hear from them. He receives hundreds of letters each day, and only those which deal with matters which are likely to interest other Meccano boys can be dealt with here. Correspondents will help the Editor if they will write on one side of the paper only.

Kenneth C. Downes.—As your father is a press photographer he should be able to help you to get those interesting snapshots for the "M.M." We look forward to receiving them.

F. Lawrence, Blackwater.—It was a pleasure to read your interesting letter. Any boy who, like you, builds lots of Meccano models, is a member of the Guild, and reads the "Meccano Magazine" regularly, is bound to have a happy life with lots of fun. Your Certificate will have reached you safely by this time.

Norman Wearing, St. Bees.—You have our very best wishes when you start business in May. We can see that you take an intelligent interest in all that goes on around you and we feel sure you will do well. Glad the Correspondence Club has been the means of gaining a good chum for you.

Albert M. Taylor, Lenton Sands.—"Meccano's the toy for fun, Meccano's the toy for play."

Meccano's the toy that you can trust to chase the blues away."

—From your letter you have evidently adopted this little couplet as your motto. You should have no more of those dreary and lonely nights now.

A. C. West, Holmewood.—Your Meccano poem, even if it did not rhyme very well, did cheer us up just as you thought it would. We shall be very glad to see you any time you come to Liverpool.

Wilfrid Wiles, New Malden.—You have our best wishes for the success of your Club concert. In our No. 17 issue you will find some verses which should serve your purpose admirably.

V. Patterson, Rathmines.—"I am very lonely now, because I have no Meccano models to make, as I have made all the models in the No. 1 and No. 2 Books." Surely it is not so bad as that, Victor! Many thousands of Meccano boys are inventing new models every day. Designing new models is one of the very finest features of the hobby, and you are missing the best part of the fun if you do not invent new Cranes, Bridges, Towers, and all kinds of new mechanisms for yourself. Remember Robert Bruce's motto, Victor, and set to work.

H. G. Burden, Wallasey.—We are glad to hear that you like your Recruiting Medallion so much, also that under the presidency of the Rev. J. C. Magee your Club is making great progress. You are quite right about the Meccano imitators, Harold, but believe us they make no real progress. Every boy these days with any sense knows how grossly inferior they are both in finish and in value, and will have nothing to do with them.

Fred Hudson, Leicester.—"I saw a Hornby Clockwork Train in a shop window and I felt like raiding it." We hope you will be able to secure one of these beautiful productions for your very own soon, Fred. You will have a wonderful assortment of Engines, Trucks and Coaches to select from next winter.

H. E. Underwood, Geneva.—Suggests that we should give puzzles, riddles, etc., in the Magazine, and sends the following:—

In Pinion Wheel my first you'll find
Unless you're absolutely blind.
My second is in Sprocket Chain,
Also in Hornby Clockwork Train.
The new Rack Strip contains my third.
My fourth you certainly have heard
In Contrate Wheels. Not in Spring Clips
My fifth you'll see, but in Bent Strips.
My sixth's in Eye Piece not in Face Plate,
Nor Girder Frame, nor Sector Plate.
My whole is a name that's very dear
To Meccano boys both far and near.

Bert Woods, Gathurst.—"I made Model No. 114 for a Meccano dealer's shop window, and he says it is through my model that he sold all his outfits. I can tell you that I felt delighted as I am only eight years old." That was a piece of good work, Bert, and we are glad to report that very many Meccano boys are doing a good turn to their dealers in the same way.

R. G. Moorhead, Ballybay.—"I think that the Correspondence Club is a splendid thing. I correspond with a Meccano boy in Cumberland, and I always receive his letters with the feeling that I have a true friend." The C.C. is firmly established now, Robert, and has been the means of creating many warm friendships amongst Meccano boys.

Effie & Vincent Horrocks, Sandford.—We welcome both of you as poetic admirers of Meccano. Your verses "The Secret of Content" possess the real poetic fervour and sentiment, but are rather too long for us to print. We shall be very glad to see the photographs you promise us.

H. Timberlake, Southall.—

"We remember that our motto is
To be helpful, clean and true.
If we keep this motto
It will help us all
In whatever we wish to do."

We can see that you have absorbed the true spirit of the Meccano Guild, H.T., and from this and your other verses, we gather that you have a sturdy and manly outlook on life.

B. Martin, Neuluc.—"No. 14 of the 'M.M.' is the best issue yet. The Magazine is fine, but I think it would be even more interesting if you published the lives of great inventors in it." What say other Meccano boys?

H. G. M. King, Farrington.—You must certainly pay more attention to your lessons, Hugh, or you will never make a real man of yourself. You are not a dull boy, and if you were as keen on your school work as you are on Meccano and Chemistry you would soon be well up in your class. We are interested in you and would like you to write us often.

Norman Cooper, Rebside.—Thanks for your very interesting letter and description of your new model. Yes, things are bad in the coal business, and we sympathise with you. We hope that by the time you read this you will be back again and hard at work.

C. Harrison, Ashington.—Photo of your boy in Meccano costume safely received, and we are not surprised to hear that he took first prize at the Carnival. We will endeavour to find space for his photo in the "M.M." shortly.

H. Goldberg, Johannesburg.—We shall have something very interesting to say about Wireless Telegraphy in the next few issues of the "M.M." We have been experimenting for some time now, and soon every Meccano boy will be able to send wireless messages to his friends and receive messages from them.

Meccano Manuals of Instructions.



There are two Meccano Manuals of Instructions, and no Meccano boy is properly equipped unless he has them both. Book No. 1 is the regular manual which goes with the main Meccano outfits. It contains illustrations and full instructions for making 323 fine models; some of the models have been designed by our own staff of experts, and others are prize-winning models contributed by Meccano boys, from every country in the world. Price 2s. 6d. (postage 3d. extra).

Meccano Manual, Book No. 2, has only recently been published, and it contains illustrations and instructions for building 100 entirely new models, very many of them prize winners. It contains Tanks, Guns, Submarines, Searchlights, and other warlike models; also a new series of simple and intensely-interesting scientific experiments which any boy can make and which impart a lot of useful knowledge. Price 1s. 3d. (postage 2d. extra).

Prices of Meccano.

No.	0	1	2	3	4	5	*5	*6
	Outfit with full instructions for building,	do.	do.	do.	do.	do.	do.	do.
	6/-	10/-	20/-	30/-	50/-	70/-	100/-	180/-
						(Carton)	(Wood)	(Wood)

* In well-finished cabinet with lock and key.

Accessory Outfits.

No.	0a	1a	2a	3a	4a	5a	5a	5a
	Converting a No. 0 into a No. 1	do.	do.	do.	do.	do.	do.	do.
	5/-	11/-	12/-	22/-	17/6	65/-	95/-	10/-
						Carton	Wood	
								25/-
								12/6

Each Meccano outfit is complete with all parts and tools necessary for building models. Full instructions are included, and the youngest boy can commence to build at once without study. An Accessory outfit may be purchased at any time, enabling bigger and more interesting models to be built. Additional parts may also be purchased separately, at prices given in our published lists. Remember that though boys play with Meccano for pleasure, and though they get more genuine fun from it than from any other toy, it also gives them a sound knowledge of engineering. Through playing with Meccano, many a bright boy has been started on a prosperous career in one of the most important and profitable professions—engineering and mechanics.

Change of Address.

Subscribers should immediately notify the Editor of any change of address. Send a postcard giving the old and new address, so that records may be kept up to date.

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