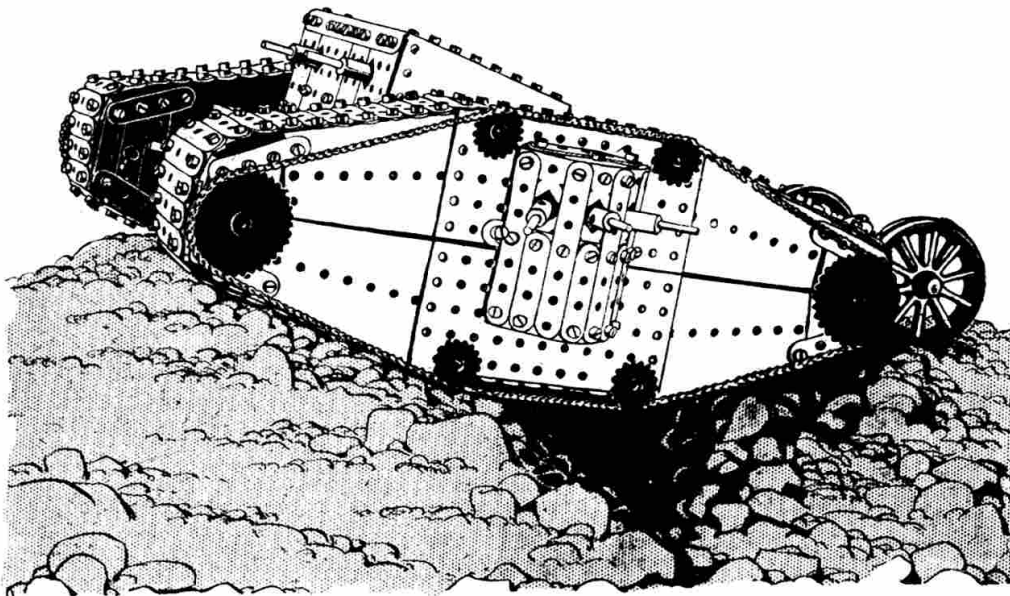


MECCANO MAGAZINE

TO HELP MECCANO BOYS TO HAVE MORE FUN THAN OTHER BOYS



THE MECCANO TANK

MADE ENTIRELY FROM MECCANO PARTS. ANY BOY CAN BUILD IT.



Editorial.

Hurry Up.

It would be very hard indeed to resist such an eloquent appeal as the above, which we have received from an ardent Meccano boy who, by-the-way, seems to add considerable artistic talent to his Meccano skill. We have hurried up, and here is No. 5. In the face of war difficulties we cannot promise to publish the *M. M.* more frequently than at present; but we can, and do, promise that each number shall be full of good and interesting things. The next number will be published early in the New Year.

When Peace is Restored.

After the war we shall commence some fine new features in the *M. M.*, and shall set to work to make it the most popular boys' magazine in the country. We have set out to make Meccano boys the happiest in the uni-

verse, and judging by our mail bag we are making excellent progress. The peace numbers of the *M. M.* will be great distributors of happiness and fun.

The Meccano Boys of the Future.

Every day we have evidence that Meccano boys stand in a class by themselves. When a boy becomes expert at Meccano his friends look up to him, his parents think better of him, and his employer knows that he has brains

and knowledge. The time will shortly come when the qualifications of an expert Meccano boy will compel recognition from every educational authority and employer in the country. We have a scheme in preparation which will help considerably to bring this about, and which will add new joys to the Meccano hobby.

Meccano Manual of Instructions Book No. 2.

I have received numerous requests for this supplementary Manual, but, unfortunately, owing to printing and other war difficulties, its issue has been delayed. It is in active preparation, and I hope to be able to announce the date of its completion in the next *M. M.*

The Editor

The New Meccano Manual of Instructions



Have you secured your copy of this fine new Manual yet? No Meccano boy should be without it. It means happy evenings the entire winter through. If you were to commence now to make the 326 fine models which it contains, it would take you years to get through them. It establishes the superiority of Meccano once and for all, and it puts every other toy in the shade. It contains a large number of prize-winning models in the last two Meccano competitions, the work of boys, who have shown most extraordinary genius. It trebles the value of any outfit purchased last year or earlier. Get your copy at once from your regular dealer, or from us if you have any difficulty. Price 1s. 3d. or 1s. 6d. post free.

How to get the Meccano Magazine Regularly

Under the new Government regulations we are unable to send the "Meccano Magazine" to any one except those who directly apply to us for it. If, therefore, you wish to become a reader of the *M. M.* it will be necessary for you to forward to us a request for it to be sent to you regularly, accompanied by 2d. in stamps for postage on the next four issues. A double subscription of 4d. will, of course, ensure the next eight numbers being sent to you.

Meccano in Wartime.

Many boys no doubt look upon Meccano as just a beautiful toy, with which they can pleasantly wile away their play hours, and for that reason alone they cherish the greatest love for it. But there is a great and serious purpose behind it which takes it out of the realm of toys and playthings, and places it on a level with the finest and most beneficent inventions of modern times.

Even the war is emphasizing and developing its usefulness, and we are proud of the fact that leading authorities have recognised its great value, and have not hesitated to make use of it. In matters of this kind it is not permissible to say very much, but all Meccano boys will be interested to know that the leading Governments of the Allies have purchased Meccano parts to be applied to purposes of war. They know and appreciate the mechanical correctness of design of Meccano parts, and their accuracy of finish, which makes them adaptable to so many useful purposes. In addition to this, there is an army of Meccano users in every allied country, where the hobby is so well known and highly esteemed, designing and inventing with Meccano parts, new devices to assist in making vigorous and effective war upon our enemies. Many of those inventions come under our direct notice, and they reveal merits which make us feel proud of the part which Meccano is playing in the greatest war in history.

If you boys could go with us through the many thousands of models which have been submitted to us in our last grand £200 competition, you would be amazed to see the hundreds of splendidly designed armoured motor-cars, aeroplanes, seaplanes, submarines, siege guns, cannon, ambulance wagons, and "tanks" which young and old Meccano boys have designed, and you would realise with us how intensely the attention of boys and men is now riveted on the drama which is unfolding itself before our eyes.

The one use, however, to which Meccano has been put which fills us with most pride and happiness is that of alleviating the sufferings of our wounded heroes in Great Britain and in France. Meccano outfits of all sizes have found their way into hospitals and convalescent homes, where wounded soldiers spend happy hours, which would otherwise be very tedious, in building Meccano models, and in inventing new ones. We receive grateful letters of appreciation from them, and from hospital nurses and doctors, telling us of the soothing and beneficent influence which Meccano has exercised over men whose nerves have been shattered by the dreadful ordeals through which they have gone. Many of these soldiers in civil life are mechanics and engineers—men whose thoughts before they were called upon to fight for their country were entirely of machines and mechanical movements. In their new-found hobby they can for a time forget their terrible experiences, and live again in a world of machines and movement, and many of these poor fellows progress so far with their hobby that they have sent in new and ingenious models for entry in our big Meccano competitions.

The lot of British and French prisoners in Germany, both civil and military, is indeed a hard one, causing sorrow and anxiety in the hearts of wives and families left at home. It is a matter for both thankfulness and satisfaction to us that Meccano is assisting so much in alleviating the trials which our interned countrymen have been compelled to undergo.

A very large number of both British and French prisoners in Germany now use Meccano, by permission of the German authorities. Some of the outfits have been sent at the request of the prisoners themselves, and others have been dispatched from home by their relatives. You can just imagine for yourselves the joy with which a Meccano Presentation Outfit is received in one of those desolate internment camps; the keenness with which the poor prisoners gather round the fortunate owner and watch and help him to build beautiful Meccano models. We have received new models from interned prisoners in Germany, which for ingenuity and beauty of design will compare with anything which has been sent to us from any country. As soon as arrangements can be made we shall reproduce some of these in the *Meccano Magazine*, and we are sure that they will fill all Meccano boys with profound admiration and respect.

We feel sure that you will all agree with us that Meccano has come to its own during the war, and is worthily playing its part in these troublous times. Very soon we shall have much to say to you of Meccano in times of peace, and of the great part which it is destined to play in the important work of invention and education.

A New Meccano Scientific Competition

The Meccano system of interchangeable standard parts besides being an admirable system of mechanical toy construction also lends itself to the construction of many models for use in demonstrating scientific principles. The models at present used for this purpose are very expensive and, further, a full set of models would only comprise a single-unit model for demonstrating each particular principle. As a consequence, it is usual in science classes to have the class split up into pairs of students, each pair on a different piece of apparatus. This necessarily reduces the efficiency of the teaching, inasmuch as the teacher has to distribute his attention over many different and separate lessons taking place all within the one class. Anything like collective laboratory teaching is therefore out of the question. With the same standard interchangeable Meccano parts, very many pieces of apparatus suitable for demonstrating different principles may be constructed, and, therefore, with a good outfit of Meccano parts a class may be provided with a number of identical scientific apparatus models all made for demonstrating the one feature, and, further, these models by being built up by the students themselves develop the constructional capacity of the student, and then, after such models have been utilised for a particular demonstration, the apparatus may be dismantled and the same parts used to rebuild other apparatus for demonstrating other features. Collective teaching is thus quite possible.

The Meccano parts being made of metal and accurately to gauge, respond quite readily to the construction of even the most sensitive apparatus.

With a view to developing this side of the Meccano business, we are organising a Prize Competition for models particularly directed to this application of Meccano. We feel convinced that there are many bright Meccano boys who are students in technical and other classes and to whom this aspect of Meccano will readily appeal. We invite our scientific young friends to enter for this competition. Prizes will be awarded for the best models suitable for scientific demonstration, and also for suggestions of suitable parts not already in the Meccano outfits which would be helpful in building such scientific models. Competitors will, of course, remember that the cardinal rule making for success in this competition will be simplicity in the construction of the model, any over-elaboration in construction in a model designed to demonstrate scientific principles being, of course, quite out of place. The rules governing our ordinary competition will also obtain in this case, the decision of the Meccano scientific experts being final. Competitors should send clear sketches, or photographs of their models, together with any experimental data arrived at in using the apparatus.

We offer the following list of suggestions for model apparatus as being typical of the kind to which competitors should direct their attention. The list is not to be taken as exclusive, but is offered merely by way of example:—

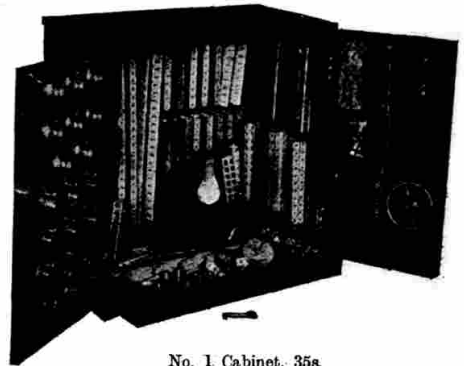
Model showing construction of braced girder work.
Model of quick return motion for a lathe or slotting machine.
Model of crank and connecting rod.
Apparatus illustrating the principle of a centrifugal governor.
Model of Hooke's or universal coupling for driving shafts in line.
Apparatus illustrating the orders of pulleys.
Apparatus for determining the efficiency of pulley systems.
Model of wheel and axle.
Apparatus for showing the efficiency of spur gear trains and worm wheel drives.
Apparatus for illustrating the principles of the lever.
The triangle of forces.
Apparatus for showing the thrust and tension in the jib and tie rod of a crane.
Apparatus for determining the stress in a roof truss and for determining the forces acting at the crosshead of an engine.
Apparatus for demonstrating the principles of the inclined plane.

The prizes will be as follows:

1st Prize ..	One No. 5 Meccano outfit in wood cabinet.
2nd Prize ..	One No. 4 Meccano outfit.
3rd Prize ..	One No. 3 Meccano outfit.

There will be additional prizes consisting of No. 1 and No. 2 outfits, &c. Entries must reach us by December 31st, 1917, and must be marked "Scientific Competition." No entry form is necessary. There are no entry fees, or restrictions of any kind in this competition.

Meccano Storage Cabinets



No. 1 Cabinet, 35s.

Splendidly made and finished in Cypress, with accommodation for the contents of any outfit up to No. 6. There are suitable hooks for the strips, girders, plates, wheels, &c., and a sliding tray with divisions, to hold the smaller parts. The dimensions of this Cabinet are 16½ in. high by 16 in. wide by 8 in. deep. It is fitted with lever lock and key.

No. 2 Cabinet, 60s.

This Cabinet is made in oak, beautifully finished, 18 in. high by 17 in. wide by 8 in. deep, fitted with lever lock and key. It holds the contents of any outfit up to No. 6, with suitable hooks for the strips, girders, plates, &c., and studs for the wheels. There is good drawer space for the nuts and bolts and other small parts. This Cabinet, well stocked with parts, is something for the Meccano boy to be proud to possess.

Our illustration shows the Cabinet stocked with Meccano parts, but, of course, these are not included in the prices given.

Prizes for Meccano Boys

We offer a prize of a Meccano Inventor's Accessory Outfit for the best essay on "How I came to take up Meccano as a hobby," and a similar outfit for the best essay on "The Meccano model which I like best, and why." Essays must not be longer than 500 words. There are no entrance fees, and no form of entry is required. The closing date is January 31st, 1918.

A NEW MECCANOGRAPH COMPETITION

The Meccanograph has excited the keenest interest amongst boys, and we have received many requests for another competition. We offer a No. 1 Meccano Storage Cabinet for the best set of 12 designs made with the Meccanograph. All entries must be received by January 31st, 1918. No entry form is necessary.

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 no, 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.

C. J. Smith, Bletchingley.—You work long hours, and we are very glad you have felt no ill-effects. You are serving your country well in helping to provide munitions for our fighters. We are pleased to hear that you still find time to invent Meccano models.

W. Platt, Walsall.—Meccano parts are real engineering parts, and that is the reason they are helping you in your work. Your father knows this, and that is why he encourages you to invent with Meccano.

R. S. Preston, Colne.—As you say, the correspondence we receive from all over the world "makes our heart glad." So far England has taken more Meccano prizes than any other country, but French and American boys are struggling hard for first place.

C. Plastow, Kew Gardens.—Mr. Hornby takes a great interest in every Meccano boy and in his work. Don't be discouraged; there are many more prizes waiting to be won.

John Smith, South Shields.—We are very interested in knowing that your teacher has commenced a Meccano class for half an hour three days in every week. Your friend "Diddle" is a wise boy, and has rendered a service to your teacher and to us. Let us know more about your Meccano club, in which we are most interested.

Ronald Ne Yard, Southend.—Thank you for your very interesting letter describing the air raids on your town. Southend does credit to our nation in taking them so philosophically. When you tell us that so many of you use Meccano, we begin to understand why you are such a steady, sturdy lot.

A. E. Martin, Walthamstow.—Your son is a clever boy to win two substantial prizes in successive years. Thanks for your testimony to the value of Meccano.

W. Partridge, Horwich.—Each letter I receive from you is a treasure to me. The new Meccano Manual is absolutely IT. There are hundreds of new ideas in it.—There is no doubt, W. P., that this is far the best Manual we have issued, and no Meccano boy should miss it.

C. D. Gadd, Didsbury.—We are pleased you like your Storage Cabinet so much. Your suggestion for a Meccano Diary is noted.

Private W. Bell, Midlothian.—"You will see that I am now in the Army. I owe a great debt to Meccano. I attribute my position as Motor-cycle Mechanic to it having unearthed and developed my engineering abilities."—We receive many letters like yours, and we are proud of the fact that so much knowledge acquired from Meccano is now being used in the service of our country.

D. C. Ramsden, Leeds.—"I am delighted with my Meccano Storage Cabinet. I only wish I had enough parts to fill it."—As your father says, these cabinets are handsome pieces of furniture, and splendid for keeping Meccano parts in an orderly way.

G. Peck, Gloucester.—"I have only two faults to find with the Meccano Magazine. It is not big enough, and it is not published often enough."—We are afraid we must wait until the end of the war before these faults can be rectified. There are many difficulties to be contended with just now, but later you may look for great improvements.

A. Mason, Colne.—We are glad to hear from you again, and we hope you won your scholarship. Entry form has been despatched to you.

W. H. F. Allen, South Tottenham.—"I never give up anything I aim for, so look out for me in the next competition."—We wish you success. If you maintain this spirit through your life, you will go a long way.

C.F.D.H., Cambridge.—I am rather an old Meccano boy, being 44; but it may be of special interest to you to know that I am blind, but I find myself able to make models with Meccano and it affords me pleasant recreation. Perhaps this information may yet show the world another use to which Meccano can be applied. I fear there will be many return sightless from the war.—There are thousands already, and unhappily there will be many more. You would be pleased to know how many of them share with you the joys of Meccano building.

R. B. Ralph, Chepstow.—"I had another make of constructional toy before, but I soon chucked it for Meccano."—That is what happens in all cases sooner or later. Now you are on the right track, the long evenings you complain of will seem all too short.

E. Brown, Calne.—Thanks for your suggestion for a Meccano Aeroplane Outfit. There are many difficulties which it would take a long time to explain to you, but we will think it over. There is no doubt about its usefulness.

T. Westell, Letchworth.—We hope that this time sickness will not prevent you from going in for the big Meccano Competition. Your gardening should keep you fit. We note that you intend to go on building Meccano models until you are 100.

D. Blake, Salisbury.—"I do not know what my little boy would have done without Meccano last winter when he was ill for seven months. His doctor said he was a clever little mechanic."—You should certainly have entered those models which he invented in the competition. We trust he is fully restored to health.

C. Clark, Brigg.—We are glad your Meccano Club is going along splendidly. Report progress as you go along. We are at work now on Book No. 2 of our Manual, but getting printed matter out these days is a slow business. Thanks for your hope that we are "in the pink." We are.

A. P. Rollett, Gainsborough.—"I got first-class honours in the Junior Cambridge Local, and I have won two prizes in your Competitions and am already on the warpath this year. I wonder how big your letter-box is. I notice that all the brainiest boys at our Grammar School have Meccanos."—We found your letter very interesting. Your prize-winning record is a good one, and we hope you will carry off a big award this year. Our letter-box is a very big one; but if our Meccano boy correspondence increases sufficiently we shall not mind installing a still bigger one.

M. A. Thomas, Carnarvon.—"I'm only a girl. Do you think it will be possible for me to become an engineer?"—It seems to us that women and girls are doing pretty nearly everything these days, and, if you have enough perseverance, we should not like to prophesy failure for you. We have heard of your famous great-uncle, and a fine engineer he was. Thanks for the poetry. The sentiment is fine and, as you say, it doesn't matter about the metre.

Etta Wilkins, Cheltenham.—It seems to us that Meccano girls are, if anything, more determined than Meccano boys. Your mother will change her opinion of you when she sees your competition models. We wish you the best of luck. We are not quite "flooded out" with letters yet, and should be glad to have another one from you. Come to see our factory when you visit Liverpool.

R. Bain, Crieff.—It certainly does say a lot for Meccano when 16 out of the 17 boys in your class described it as their favourite toy. You need have no fear about our keeping the Meccano Magazine going, and, when peace is restored, you will see great improvements.

Hector Hartley, Romiley.—"Can you come over to Romiley to see me? You have more money than me, and you can come to our house."—This is very nice of you, Hector, and if we could spare the time nothing would give us greater pleasure. We hope to see you here some day.

L. Cunliffe, Newton Heath.—We are glad to know about your Meccano kitten, Jerry. He evidently thinks you have bought your outfit for his benefit. Thank him for sending his best wishes to us.

J. Houston, Dunston-on-Tyne.—"If a competitor sends in several good models, will he be awarded several prizes?"—We want competitors to send in all the models which they invent. There is no limit to the number of prizes which one competitor may win.

Wm. Callen, Walton.—You are wrong in thinking that only boys with No. 6 outfits can win prizes. If you will look through the prize list you will see that far more awards are made to small simple models than to complicated ones. We quite understand your "thrill of pride" at being numbered amongst the great army of Meccano boys.

F. P., Geashill.—We can hardly tell you how much pleasure it gives us to know that your 9-year-old son, who is so afflicted, derives enjoyment from playing and inventing with Meccano. Would he care to write us a little note now and again?

T. Lorimer, Blyth.—

"Lords and dukes,
Put down your boots,
Put right your hair
And go to the fair,
They are selling Meccano.
Meccano is a joy
To your boy;
It makes him a happy
Little chappy."

—Shakespeare might have written better poetry, but he couldn't have come closer to the truth than you have done in the last bit, Thomas.

R. Mitchell, Luton.—There is no objection to your using what extra parts you require, over and above your outfit, in making up your competition models. Sorry to hear that nearly everybody in Luton has got the mumps.

M. M. C. Drahman, Wellawatta.—We are pleased to know that so many boys in Ceylon are interested in Meccano. We shall be very glad to have particulars of the new models which you have invented. Thanks for your appreciation of the Meccano Magazine.

J. Maclean Todd, Oxford.—"I have thought of about 15 new models which I hope to send up in the Meccano Competition."—We shall be very glad to receive them. We think that your best chance of success would be to select one or two and devote all the time you can spare to making them as perfect as you can get them. You have our best wishes.

G. W. Gunn, Glasgow.—We are pleased to hear you have decided on an engineering career, and have already started your apprenticeship. The firm you have joined is a good one, and we can see from your letter that you are making progress. We shall expect to see some first-rate models from you in future competitions.

G. Brown, Blackburn.—"One of my friends has sent out a Meccano outfit to a prisoner of war in Germany, and he says in his dull camp he is the envy of all his fellow prisoners, who sit and watch him day after day making his models."—We are always gratified to have proofs like this that Meccano is bringing solace to our war sufferers.

No. Prices of Meccano

0	Outfit with full instructions for building	4/6
1	do. do.	7/6
2	do. do.	13/6
3	do. do.	20/-
4	do. do.	32/6
5	do. do.	47/6
6	do. do.	115/-

No. 5 in well-finished cabinet with lock and key.

Accessory Outfits

No.						
0a	converting a No. 0 into a No. 1	..	3/6			
1a	do. do.	1 do.	2	..	7/-	
2a	do. do.	2 do.	3	..	8/-	
3a	do. do.	3 do.	4	..	13/6	
4a	do. do.	4 do.	5	..	14/-	
5a	do. do.	5 do.	6	..	37/6	

Meccano Outfits with Electric Motors



These are the regular Meccano outfits with the Meccano Electric Motor added. Each one is a magnificent present for any boy.

No. 1x	with non-reversing motor	13/6
" 2x	" " "	19/6
" 3x	" reversing motor	30/-

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.

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