VOL. 1. No: 4 JULY-AUGUST, 1917.

MECCANO MAGAZINE

TO HELP MECCANO BOYS TO HAVE MORE FUN THAN OTHER BOYS

The Life Story of Meccano

By Frank Hornby.

(*Continued.*)

After I was married and had boys of my own I still made models as eagerly and enthusiastically as ever, and when my boys grew old enough, it was my delight to make mechanical toys for them, and join in their play.

We were always working and playing together; always thinking out something new, and it was my delight in my spare moments to plan out new ideas and games for them to play with. It was in this way that I first came to think of the Meccano system.

One snowy Christmas Eve I was taking a long railway journey, and as I sat in my corner seat, my mind was, as usual, turning over new schemes for my boys' enjoyment. We were experiencing some trouble in our little workshop through not having a number of little parts for building up a fine crane which we were making. We could not buy them anywhere, and it would be a long laborious process to make them. I wanted some parts which could be applied in different ways to the model, and which could be adjusted to give different movements by alteration of position, &c., and as I studied the problem it seemed to me that the only way to get what I wanted was to have parts perforated with a series of holes so that they could be bolted up into the model in different positions, and at different angles.

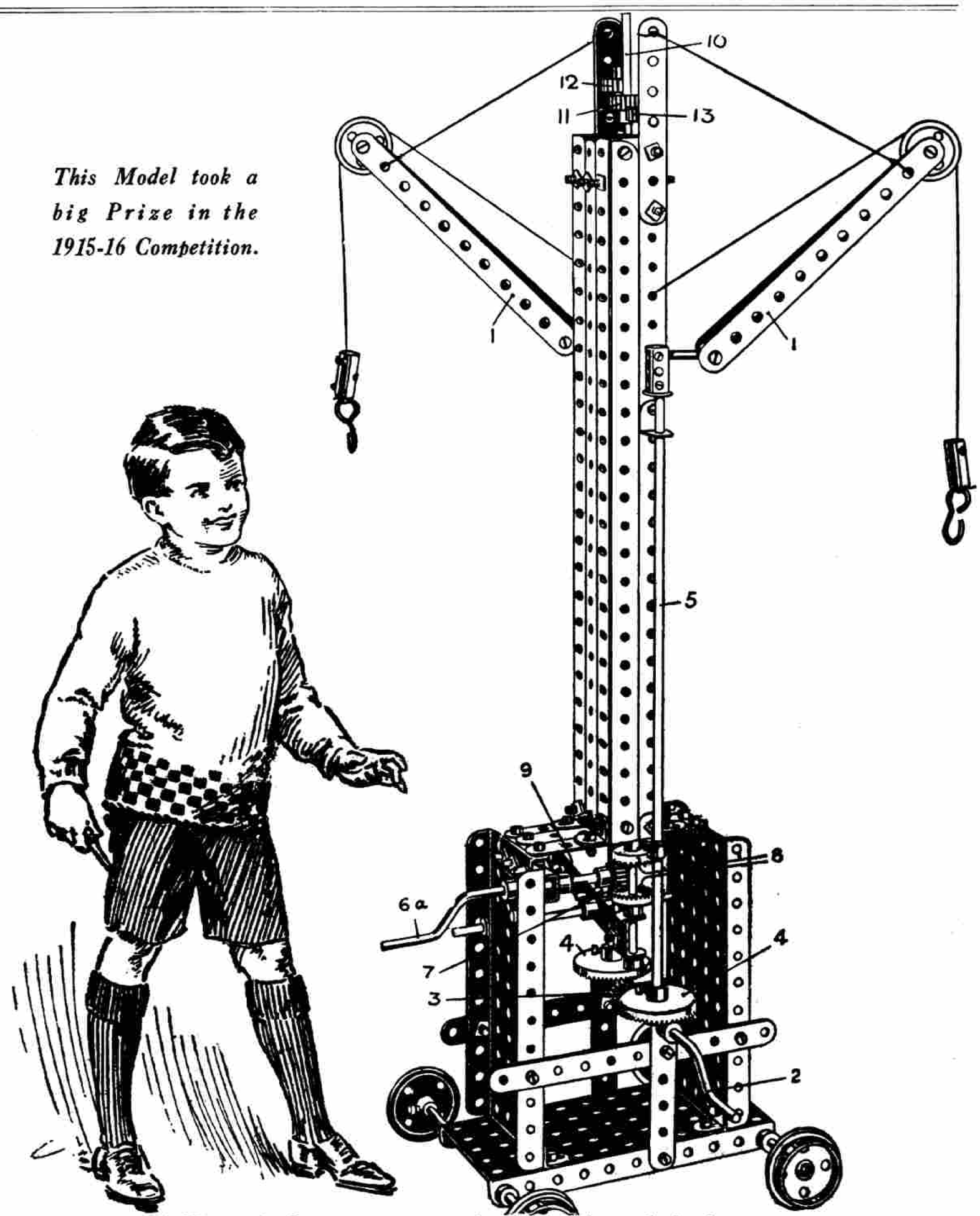
I tell you, boys, that I was pleased when I hit on this solution of our trouble, but I had no idea then that the few hours' close thought which I was giving to my hobby were destined to change the entire future course of my life and work. The more I thought over my new parts the better I liked them. It seemed to me that if I only had a number of these parts, made of sufficiently strong material, and with holes coming in the right places, we could not only build the crane we were busy on, but other cranes of different types.

I felt very enthusiastic over the idea, and as soon as I got back home I bought a sheet of copper, and commenced to cut out the parts. I used copper because it is a soft metal, and was easy for me to work. My first difficulty was to decide on the most useful types and sizes of the parts which I was going to use.

I had by this time got away altogether from the idea of making them just for use in our new crane, and I was determined that no matter what model we made in the future, the same parts should be useful. I finally decided that I would make all my strips ½in. in width, with a hole every ½in. apart, from the centre of the strip; I first made a 2½in., a 5½in., and a 12in. strip, but I found that the latter was wrong, if I intended to keep a central hole, so I increased it to 12½in. It was a long job to make all the strips that I wanted, but as I thought how useful they were going to be to me, I never got tired of the work.

(*To be continued.*)

This Model took a big Prize in the 1915-16 Competition.



Editorial.

Competition Results.

I am sure that it must have tried the patience of all you boys to wait so long for the results of the big Meccano competition, but here they are at last, and many a happy boy is now enjoying the handsome prize which has been sent to him. I congratulate all the winners, and to the losers I would say that if they persevere and send something in for the next competition which contains any real merit, they will certainly get a prize. Entries are already coming in, and I prophesy that the 1917-8 competition will be the most successful we have ever had.

Meccano Helps Our Heroes.

I have received many letters recently telling me how useful Meccano has proved itself in hospitals in this country and in France in interesting and amusing our wounded soldiers. If any of you boys or parents wish to confer a boon on any of our wounded heroes you could not do better than send them a Meccano outfit.

News from Salonica.

I have received a very interesting letter from a member of our staff now with the forces, who writes: "I had occasion to visit Salonica recently, and in a quaint old emporium I came across several Meccano outfits, and I could not help being pleased by finding the results of perhaps my own work in such an outlandish place." This little touch of home must have given great pleasure to our young friend. Grecian boys have been fond of Meccano for many years past.

Meccano Scarce This Year.

Meccano is going to be very scarce this year, owing to most of our factory being engaged on national work, and I am afraid that many boys who defer purchasing will have to go without until we can increase our output. The best advice I can give you is that you buy your new outfits and parts early, and do not wait until December.

The Editor

RESULT OF THE
Grand Meccano Competition.
Total Value of Prizes Awarded £262 12 6.

A PERSONAL MESSAGE TO EACH COMPETITOR.

I am sorry I have had to keep you boys waiting so long for the results of the big Meccano Competition this year, but I am quite sure that you will all understand the great difficulties which we have had to contend with. The entries from all over the world were much more numerous than in any previous competition, and our greatly reduced staff of model-makers have had to work night and day building up the selected ones for the judges. Anyhow we have been able to get out the list at last, and the prizes have all been despatched to the fortunate winners.

All-round excellence has again been the outstanding feature of the entries. Some very fine models indeed have been sent in and a large number of them will be included in the No. 2 section of the Meccano Manual, which is now in course of preparation. I want all you boys to look out for this No. 2 section of our Manual. It will supplement the big Meccano Manual, and will contain an entirely new series of fine models, which will bring joy to the hearts of all enthusiastic Meccano boys. Due notice of its publication will be given in an early number of the Meccano Magazine.

I hope that all competitors in the last competition, both winners and losers, will have another good try in the new Grand Competition which is now running. Prizes to the value of over £200 will again be given, and any model showing merit or novelty in the opinion of the judges is sure of winning a prize.

The entries in the last competition, and the letters which I am daily receiving from Meccano boys, show me that the enthusiasm for the hobby is growing every year. Many boys of course look upon Meccano as just a wonderful toy, and write to me of the intense pleasure which they get from it, but a great and growing number of boys and men take their hobby very seriously. They realise that through it they are acquiring invaluable knowledge of mechanics and engineering, and that without it they would miss a most valuable help in their studies and in their work. To the serious Meccano student I would say that we have many plans for increasing the usefulness of Meccano parts, which will render it the finest aid to the study and practice of engineering which has ever been known. We are going to help Meccano boys, and we are going to get them to help each other, by means of a scheme which is now in preparation, which I hope shortly to announce.

Our factory at the present time is principally engaged upon work of national importance, but all the while, we are studying and perfecting plans to make Meccano boys the happiest, most intelligent, and most useful boys in the world.

One of the lessons which this great war has taught us is that in the past we, as a nation, have displayed inefficiency in our system of dealing with technical education, and that unless we greatly improve our methods, we shall lose our position of supremacy in manufacture and commerce. I believe that in the work of better education which must follow the dawn of peace, Meccano will play an important part, and that before very long, it will be recognised as an indispensable aid to the rapid and thorough training of students of engineering.

F. Hornby

Managing Director, Meccano Ltd.

LIST OF PRIZE WINNERS.

1st Cash Prize - - £50 0 0
Divided between two competitors.

E. C. Herbert, 16, Harradon Rd., Aintree, Liverpool ..... *High-speed Ship Coaler*
E. F. Businger, 3,666, Park Av., Bronx., New York, U.S.A. .... *Embroidery Machine*

2nd and 3rd Cash Prizes - £35 0 0
Divided amongst four competitors.

J. Clark, 60, Regent St., Greenock ..... *Lowering Apparatus for Lifeboats*
A. W. Welden, 71, Marlow Road, Anerley, London, S.E. .... *Babcock & Wilcox Boiler*
A. Touzet, 6, Rue des Jardins, St. Etienne (Loire) ..... *Meccano Puits*
H. Volkman, 111, South 9th St., Brooklyn, New York, U.S.A. *Ore-handling Machine*

4th Cash Prize - - £7 10 0

N. W. Lee, "Ardennes," Staindrop Rd., Darlington ..... *Machine Drill*

5th Cash Prize - - £5 0 0

J. & C. Bell, 5, Maitland St., Newbiggin-by-the-Sea ..... *Freestone Planing Machine*

6th Cash Prize - - £2 10 0

E. Bobard, Avenue de la Gare 8 bis, Beaune ..... *Tour le Moderne*

6 No. 5 MECCANO OUTFITS

A. Pux, 54, Rue Madame, Paris ..... *Ice Skates*
W. Symm, 8, Collingwood Ter., Dunston-on-Tyne, nr. Gateshead *250-ton Double Block Girder Crane*
Bert Gardner, Mount Carmel, Utah, U.S.A. ..... *Quarry Drill*
Cecil Kempster, 66, Ellesmere Rd., Gt. Berkhamsted ..... *Multiple Punching Press*
A. A. Holbrook, 612, Kenwood Boulevard, Milwaukee, U.S.A. .... *Wild Animal Trap*
J. Richard, 10, Rue des Bas-Sablons, St. Servan ..... *Pont Roulant St. Malo*

10 No. 4 MECCANO OUTFITS

John McGee, Pearl St., Council Bluffs, Iowa, U.S.A. ..... *Adding Machine*
M. Toupnot, 5, Rue de Laborde, Paris ..... *Improved Meccanograph*
Fred Wolfenden, 63, Barndale Rd., Mossley Hill, Liverpool ..... *Breast Drill*
B. Gipson, 17, Queen's Gardens, Herne Bay, Kent ..... *Tank*
Jean Monseuerque, Pavillon 3, Route de Hermin, Le Creuzot *Machine à Rayer les Canons*
E. Lang, 102, Barton Ter. W., North Adelaide, Australia ..... *Titan Crane*
J. D. Bean, 100, E. State St., Doylestown, Pa., U.S.A. *Campbell Webb Printing Press*
R. Newton, 65, Selwyn St., Leigh, Lancashire ..... *Spinning Mule*
P. Ozanne, Pont l'Eveque, Calvados ..... *Typewriter*
George Johnston, 31, Woolmarket, Berwick-on-Tweed ..... *Drilling Machine*

18 No. 2 MECCANO STORAGE CABINETS

W. A. M. Brown, 9, Brookfield Ter., Meanwood, Leeds ..... *Leeds Town Hall*
Gordon Banks, 462, Helmshore Rd., Helmshore, Manchester ..... *Dobby and Loom*
R. F. Fidler, 16, Sydney Rd., W. Ealing, London ..... *Heliograph*
W. C. Cunnington, Helpston Heath, Peterboro' ..... *Tractor and Drag*
A. B. Grosvenor, 8, Spring Road, Brightlingsea, Essex ..... *Improved Meccanograph*

LIST OF PRIZE WINNERS—Continued.

W. Kendrick, 7, Sugar Lane, Manchester.....*Steam Navvy*
J. E. Yates, 26, Market St., New Mills, Stockport.....*Silhouetting Machine*
J. Taylor, 10, Colenso Rd., Holbeck, Leeds.....*Bale Lifter*
C. D. Gadd, 40, Bamford Rd., Didsbury, Manchester.....*Speedometer*
C. J. Parr, 45, Hazelbank Rd., Catford, London.....*Submarine*
E. C. G. Handscomb, 29, Fairlawn Mansions, New Cross, London, S.E. *Well-boring Rig*
S. F. Martin, 18, Avon Rd., Upper Walthamstow, London, N.E. *Cinematograph Mechanism*
S. S. Hall, "Glendon," College Rd., Epsom, Surrey.....*Iron-ore Transporter*
Robert Gray, "Tharrawaddy," West Melton, Rotherham *Slide Valve Marine Engine*
E. W. Lamb, 102, Lancaster Rd., East Ham, London, E. *American Railway Carriage*
F. J. Tickner, 15, Highcroft Gardens, Golders Green, London, N.W. *Reaping and Binding Machine*
W. E. Mather, 20, Ormidale Terrace, Edinburgh.....*Reversing and Reducing Gearbox*
Capt. L. G. Humphreys, A.S.C., British Prisoner of War, Offiziergefangenenlager, Friedberg-in-Hessen, Germany.....*5-Cylinder Compression Engine*

18 No. 1 MECCANO STORAGE CABINETS

G. S. Reid, 54, Marchmont Rd., Edinburgh.....*Egg Beater*
W. T. & N. Hendry, Hertford Hse., Sanderson Rd., Newcastle-on-Tyne *Designograph*
P. Eaton, "Haslemere," Witney, Oxon.....*Road Sweeper*
J. Butterwith, 42, Lorne St., Fairfield, Liverpool.....*Street Lamp*
A. E. McGechan, 7, Hill Rd., Barrow-in-Furness.....*Knife-grinding Machine*
J. T. G. Torlesse, Little Setley, Brockenhurst, Hants.....*Spring Balance*
P. Cudworth, "High Clere," George St., Cambridge.....*Binder*
Wm. Parkin, 55, London Rd., Reigate, Surrey.....*Dancing Sailors*
E. H. Goodyear, 7, Bright St., Eastbourne, Darlington *Guillotine Paper-cutting Machine*
A. A. B. Gardner, 72, Vernon Rd., Leytonstone, Essex.....*Ship's Telegraph*
Wm. Bell, 66, Needham Rd., Liverpool.....*3-speed Gearbox*
F. E. Kerr, 15, Tempest Rd., Beeston, Leeds.....*Grinding Mill*
O. H. Quibell, Shalem Lodge, Newark-on-Trent.....*Revolving Bookcase*
A. A. Blasdale, 93, Holyhead Rd., Coventry.....*Sextant and Theodolite*
H. J. Archer, 17, Conduit St., Belfast.....*Street Sweeper*
Harry Fletcher, 1, Mount Villas, Chesterfield Rd., Mansfield.....*Dynamobile*
D. C. Ramsden, 257, Hyde Park Rd., Leeds.....*Auto Steering Car*
F. Yates, 26, Market St., New Mills, Stockport.....*Cantilever Bridge*

20 No. 3 MECCANO OUTFITS

Leon Dalibot, 53, Rue de la Palestine, Rennes.....*Transbordeur*
E. A. Blench, 74, Squires Lane, Finchley, London, N.....*Speedometer*
B. Brewster, 942, High St., Dedham, Mass., U.S.A.....*Dock Crane*
P. Salatier, 49, Cours de la Liberté, Lyon.....*Grimpeur Automatique*
M. Brunet, 16, Rue St. Perpétué, Nîmes.....*Roue Cremaillère*
Roy Furse, Roseberry Av., Preston, Victoria, Australia.....*Foot Road Bridge*
J. Hamilton, Canadian Villa, Knock, Belfast.....*Orrery*
E. W. Tomlinson, Cherokee, Iowa, U.S.A.....*Quebec Bridge*
H. L. Hyan, 620, West 149th St., New York, U.S.A.....*Military Land Glider*
G. E. Spooner, 30, Toft Wood Rd., Crookes, Sheffield.....*Electric Tramway*
V. G. Mellor, 46, St. George's Rd., Winsford, Cheshire.....*Punching Machine*
W. W. Honnor, Alpha Rd., Prospect, Adelaide, Australia..*Poultry Green Field Cutter*
M. Deramaux, 19, Rue Fontaine, Paris, 9me.....*Presse d'Emballage*
P. Cheneau, Villas Médicis, La Bourboule, Puy de Dôme.....*Jeu de Petits Chevaux*
Henri Lacroix, Rue de l'Hotel de Ville, Mantua.....*Jeu de Course*
J. H. Lee, 176, Lynwood Av., Providence, Rhode Island, U.S.A. *Vertical Fire Engine*
A. V. der Leith, 256, St. Palisade Av., Riverdale, New York, U.S.A. *Electric Locomotive Crane*
A. S. Hook, Tryon Rd., Lindfield, Sydney, Australia.....*Jacquard Loom*
J. M. Nunn, 4,001, Lincoln Av., St. Louis, Mo., U.S.A.....*Ditching Machine*
J. Verlinden, 27, Rue Germain, Lyon.....*Pèse Lettre*

25 No. 2 MECCANO OUTFITS

Arthur Clayton, 84, Edinburgh Rd., Walthamstow, London, E. *Automatic Match Machine*
B. J. Lynch, 1,211, Kemble St., Utica, New York.....*Baggage Truck*
A. W. Woodman, 2,223, Capitol Av., Omaha, U.S.A.....*Discophone*
P. Gascuel, 54, Avenue de St. Cloud, Versailles.....*L'Avocat Automate*
R. Govaert, 8, St. Paul's Ter., Norton, Malton, Yorks.....*Beer Waggon*
C. Whitfield, 22, Railway Ter., Usworth Colliery, Co. Durham.....*Potato Reaper*
L. G. G. Charlesworth, 1, Ellesmere Rd., Saltley, Birmingham..*Drafting Machine*
G. M. Abbott, 171, West 79th Street, New York, U.S.A.....*Niagara Arch Bridge*
J. Wasem, Côte 106, Neuchâtel, Suisse.....*Horloge*
M. Lambert du Chemays, 15, Rue Premartine, Le Mans.....*Blason*
A. P. Wittemore, Charleston, W. Virginia, U.S.A.....*Automatic Hammer*
F. Smith, Elmwood Heights, Pittsfield, Mass., U.S.A.....*Meccano House*
J. K. Hare, "Westholt," Henlow, nr. Biggleswade, Beds.....*Metronome*
L. H. Barker, 8, Welbeck Rd., East Ham, London, E.....*Burglar Alarm*
A. Appert, Villa Pomponne, Montauban, Tarn-et-Garonne.....*Tour Elliptique*
R. S. Crampton, Evanston, Illinois, U.S.A.....*Meccano Racer*
G. Dupuis, 114, Osgoode, Ottawa, Ont., Canada.....*Motor Cycle and Side Car*
W. Hibbert, 204, S. Brand Boulevard, Tropico, Cal., U.S.A.....*Paper Perforator*
E. Ravilious, "Aylwin," 46, Charleston Rd., Eastbourne.....*Pastry Cutter*
J. Cuthbert, 20, Queen Anne St., Newcastle-on-Tyne.....*Pantograph*
L. Brunet, 16, Rue St. Perpetue, Nîmes.....*Ombrelle Pliante*
J. J. Pierse, Bishops Court, Lixnaw, Co. Kerry.....*Mechanical Spinning Top*
F. Noll, 4,222, Broadway, Indianapolis, Ind., U.S.A.....*Trench Machine*
F. A. Voos, 90, N. 11th St., Newark, New Jersey..*Improvement in Meccanograph*
E. White, 1,126, S. 1st St. West, Cedar Rapids, Iowa, U.S.A.....*Concrete Mixer*

26 No. 1 MECCANO OUTFITS

E. Bullough, 391, Manchester Rd., Westhoughton, Bolton *Marking Machine for Lawns*
G. S. Reid, 54, Marchmont Rd., Edinburgh.....*Mouse Trap*
L. Rossignol, 8, Rue Lateral Raymond, Toulouse..*Gymnastique a la Barre Fixe*
M. Prolium, Rue Regale, No. 3, Nimes.....*Fer à Repasser*
D. V. Dhumatkar, c/o Dr. P. R. Pilgaokar, 10th Sadashine St., Kandewady, Bombay, India.....*Bullock Cart*
E. Lang, 102, Barton Ter. W., North Adelaide, S. Australia.....*Desk Pencil Stand*
P. Arnold, 31, Quincy Place, N.W., Washington, D.C.....*Compass*
L. Woodworth, F.D.L., Box 385, Ariola, Ill.....*Differential Chain Hoist*
J. Rumfitt, 20, Whalley Old Rd., Blackburn.....*Palarquin*
R. Parriss, 14, Silver St., Trowbridge.....*Sword and Sheath*
G. Donsset, 14, Ave Henri Derain, Vernouillet.....*Porte Couteau de Table*
R. Picard, 6, Rue Sheurer-Kestnex 6, Poitiers.....*Chasse Noyau*
Theo. Hornden, 20, Jefferson St., West Carthage, New York, U.S.A...*Fanning Mill*
H. A. Churchill, 103, Station Rd., Market Drayton, Salop..*Knife Grinding Machine*
C. Turney, 302, W. Burlington St., Fairfield, Iowa, U.S.A.....*Freight Car*
J. Goix, 33, Avenue de Saxe, Paris.....*Pupitre à Chant*
A. Selmersheim, 70, Bd. Garibaldi, Paris.....*Bamboulas*
E. C. Doyle, 1,715, State St., Little Rock, Ark., U.S.A.....*Cylinder Press*
F. Carlile, Lamoni, Iowa, U.S.A.....*Traction Engine*
E. D. Gill, 26, Woodbines Av., Kingston, Surrey.....*"The Magic Sector Plates"*
H. C. Johnson, 99, Belgrave Rd., Aigburth, Liverpool.....*Clothes Horse*
W. Esslinger, 37, Cours d'Herbouville, Lyon.....*Famille Meccano*
R. Ricaut, 75, Bd. Carnot, Le Fesinet.....*Machine Bouche-Bouteilles*
H. E. Gibson, 3rd University Cottage, Berkeley, Cal., U.S.A.....*Concrete Paver*
P. Lloyd, c/o Mrs. Heywood, Crawford Hotel, Crawford St., Rochdale *Adding and Subtracting Machine*
C. Tusoli, 13, Rue Ste. Hélène, Lyon.....*Lampe à Arc*

20 No. 0 MECCANO OUTFITS

R. Siemens, 70, West 128th St., New York, U.S.A.....*Egg Beater*
K. W. Towle, c/o Newport & Providence R. Co., Newport, Rhode Island, U.S.A. *Electric Locomotive and Power Station*
A. Jeanrot, 23, Rue du Prinal, Bourges.....*Tourniquet pour Cartes Postales*
H. B. Philpott, 2, Westfield Buildings, Wakefield Rd., Morley.....*Breakdown Crane*
A. J. Lowther, The Knoll, Warwick Rd., Acocks Green, Birmingham *Automatic Weighing Machine*
A. G. Blasby, 11, Northcote Rd., Norwich.....*Revolving Tower*
J. M. Doughty, N. Main St., Greeneville, Tenn., U.S.A.....*Machine Shop*
C. Raciotpi, 4, Sylvan Ter., New York.....*Italian Flour Mill*
W. E. Wright, 23, Checketts Rd., Belgrave, Leicester.....*Jig Saw*
R. Voillanne, Villa Peyronnel, La Bourboule, Puy de Dôme.....*Diplodocus*
E. Smedley, 20, Vergette St., Peterborough.....*Hard Stone Saw Frame*
H. W. Burnett, 16, Graig View, Ynysddu, Mon.....*Potato Harvesting Machine*
B. Corklin, 3,748, Wilton Av., Chicago, Ill., U.S.A.....*Telegraph Instruments*
R. Von der Lippe, Sparta, Ill., U.S.A.....*Ditch Filler*
R. Chaput, 22, Alpine, Dubuque, Iowa, U.S.A.....*Wood Sawing Machine*
C. L. Bird, St. Fagan's Rectory, Cardiff.....*Mechanical Hacksaw*
E. Fremonger, Plainfield, New Jersey, U.S.A.....*Guillotine for Cattle*
R. Prive, 3, Rue de Luynes, Paris.....*Croix de Guerre*
D. Goldsmith, 209½, W. Seminary St., Danville, Ill., U.S.A.....*Destroyer*
J. N. McKay, Caledonia, New York, U.S.A.....*Foot Power Wood Turning Lathe*

BOYS! A GRAND NEW £200 PRIZE CONTEST

has started. Get your Entry Form either from your dealer or from us. Any boy can compete, and remember that more prizes are given for good small models than for big ones. There are no entrance fees or restrictions of any kind, so get to work at once, boys, and send in photos or drawings of that new model which you have taken so much pleasure in inventing, and building, and playing with.

Closing date March 1st, 1918.

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.

G. S. C., Mereside, Ramsey.—Thanks for your thoughtful suggestions, which will be kept in mind. You will quite understand though, that until the war is over, it is impossible to manufacture new Meccano parts or new toys. Write us often.

C. B., Lincoln.—We note that you consider that the *M. M.* is "a great stunt." We have every hope that the war will not bring it to a standstill, as you fear.

S. B., Glasgow.—Your spending money came in very useful. With a No. 4 outfit you need have no fear of the long winter nights.

J. E., Aspatria.—Why *are* some boys so foolish? Of course your friend was disappointed with his imitation outfit, and now he will have to begin all over again. He ought to thank you for putting him on the right track.

R. E., Johannesburg.—This is the first time we have heard of Meccano strips being used as splints for a broken arm. We hope your sister is going along nicely.

F. B., Hull.—"At school quite a lot of boys have Meccano, and once we get together, by jove, there is no stopping us. If another boy enters the happy throng and says that any other outfit is as good as Meccano, he never attempts it again." Glad you converted your friend, F. B. There is more joy over one sinner that repenteth—— You know the rest. Give our love to all your Meccano pals.

B. W., Fordingbridge.—Our factory *is* a big one, and it will soon be bigger still. Sorry the birds deserted their nests in your garden.

L. H. (Mrs.), Newquay.—Thanks for your very interesting letter. Your boy's enthusiasm for engineering should certainly be encouraged, and Meccano will be of great assistance to him. We deeply sympathise with you and your boy in your terrible loss.

W. M., Sheffield.—We could wish for no better champion of Meccano than yourself. Your letter makes good reading, and we may publish it when we can find space. Any boy who buys the goods you mention, is, as you say, going to suffer a big disappointment.

H. E. W., Brighton.—We note that you have read the *M. M.* "with glowing eyes." Don't waste time in trying to discover perpetual motion. Mr. Hornby was doomed to failure when he tried it, and we are quite sure you will be no more successful. We like your spirit and enthusiasm just the same.

N. E., Blaydon-on-Tyne.—"My best Meccano friend is John Edwards, and he says that Meccano is worth its weight in gold, and he's jolly well right." Of course he is, Norman. Your daddy seems to know what is good for his boy.

T. G. M., Sapcote.—"This is true, isn't it?"

M eccano
E xclusively,
C hildren
C rave,
A sking
N o
O ther.

Perfectly true, T. G. M.

J. J., Yorks.—"I wish I could come over and see you, but I am too far away, and besides, there is my train fare, and who can pay that? Nobody in our house." Never mind, J. J., perhaps you will come over some day to see your uncle, and if you do, why, come up to see us.

J. B., Dover.—To stay at home and cheer your mother up is a splendid part for you to play, J. B. We sincerely hope your dad will come back to you safely.

W. H., Northampton.—"Do please put a photo of Mr. Hornby in the next issue of the *M. M.*, he must be such a dear." He is, W. H., but he's desperately shy.

W. P., Brightlingsea.—"It seems funny that boys write to grown-up men like this. Do you mind, or do you laugh at the letters you receive?" Our heart is filled with warmth and love for Meccano boys, and there is no room for laughter. During the happy hours we spend reading your little confidences, we seem to be with you in your own homes, and to have known you always.

W. P. T., Bellshill.—"You said that you have a warm spot in your heart for every Meccano boy. I wonder what is the area of your heart?" We are beginning to think it must be a tremendous size already, and there is still lots of room. We have put you there, William, in a specially warm place.

H. E. B., Bristol.—We have never heard of a Meccano kitten before, except the one on the cover of our No. 0 Manual. "Tiger" seems to be a most intelligent animal. Have you taught him to turn the handles of your Meccano models?

F. R., Tottenham.—You must not take too much notice of your mother when she says you will never win a prize in our Competition. She only says that to make you more determined. Work hard, and you will surprise her some day.

M. A. L., Acton.—"My boy takes the Meccano Manual to bed with him every night, and he arrives at breakfast with it tucked under his arm." It is a pleasure to hear of such keenness in a boy so young. We read all your letters with great interest.

F. P., Westbourne Park.—"I have found out that if a pulley cord gets slack and slips, the best method of making it taut is to moisten it with water slightly." This is a good tip for other Meccano boys.

A number of replies are crowded out of this issue.

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 not 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.

From a Prizewinner.

Dear Sir,—I have safely received this morning the No. 3 set of Meccano that you awarded me in the Meccanograph competition; please accept my very best thanks for it.

I cannot say I was altogether surprised to get it, for I felt if I did not win, some one would have to put in a great many hours of work to beat me. The designs I sent represented the pick of about 150 hours work, yet they had not been posted four hours before I found another movement that gave quite a fresh style of designs; this shows how practically inexhaustible are the possibilities of the machine, and emphasized to me that I might have very easily have been beaten.

My win has greatly interested the Meccano clan in this town, and I have given your letter announcing my win to one of your agents to post in his window, with one or two sample designs of somewhat similar nature to those sent in. This, I hope, may do you some good.

I like your new competition for models illustrating different scientific and mechanical principles. Not long ago I was trying to explain how the differential of a motor-car worked, and in the end, for it is a difficult thing to explain by word of mouth, I got Meccano out and made a small model showing the principle. I take it that it is such a model as that was that you wish to have entered in your new competition, though it is not included in your list.

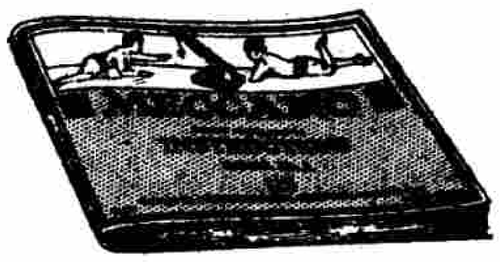
Again many thanks, Faithfully yours,

(Signed) DAVID BRIGGS.

Sprocket Chain.

Our factory will be able to commence deliveries of Sprocket Chain in the course of a few days. Orders should be placed at once, through your dealer, or with us if you have difficulty. The price is 3d. per ft.

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 year 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.

Prices of Meccano

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

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

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.

PUBLISHED BY MECCANO LTD.,
BINNS ROAD, LIVERPOOL.
Printed by Taylor, Garnett, Evans, & Co., Ltd., Liverpool, Manchester, and London