

A Fine New Meccano Model: The Lathe.
 developed form is the Capstan and Automatic Lathe and a large number of these machines are used in the manufacture of Meccano parts. By a series of successive operations the finished articles (such as buffers or threaded couplings) are turned out very rapidly. The machines need practically no attention except to be fed with lengths of raw material and it is a fascinating sight to watch a battery of these Lathes at work. Their action seems almost human and the spectator cannot but admire the skill and ingenuity of the engineers responsible for their design.

## Editorial.

Big Competition Closed.
Our $£ 250$ Competition closed on April 15 so far as entries from the United Kingdom are concerned. Many thousands of models have been entered and the examination and adjudication, although proceeding as rapidly as possible, will necessarily take some time. We shall announce the results as soon as possible.

## Play-Writing Competition.

Elsowhere in these pages attention is drawn to the fact that the Play-writing Competition closes on the 30th instant. This Competition offers an opportunity for those Meccano boys who have literary talent and a leaning to acting to show what they can do, and I have no doubt that the response will be conaiderable.

The New Zulu Trains.
In this issue is announced a fine new type of clockwork train and a tank loco, as well as several new trucks and wagons. These accessories add greatly to the fun to be obtained from owning a model railway.

A further announcement is also made in regard to a new type of point and the range of Meccano Rails, Points and Crossings is now considerable. A complete list will be sent on application. It is only natural for the owners of Hornby and other trains to prefer these products of the Meccano factory, for they are built for hard wear and are of the same excellent quality as is Meccano itself.
The Meccano Guild.
The Secretary of the Guild informs me that during the past winter the Guild has gone
forward by leaps and bounds. He has been kept busy helping Meccano Clubs not only in this country, but also on the continent and overseas, where Meccano Clubs are increasing. It has always been my firm conviction that there is a great future before the Guild movement. The letters and reports which come from the various Clubs are full of enthusiasm and it is a delight to read them.
The Future of The Meccano Magazine.
I receive large numbers of letters from readers by every post, telling me how they consider the "M.M." improves with each issue. In our last issue I was able to announce that the " M.M." would be published monthly during the last four months of the present year (September to December). Some splendid features are in store for future issues, including photographs of a large number of such ongineering appliances as cranes, bridges and

## Editorial-(continutad).

locos, in which Meccano boys delight. There are also some fine new Meccano models waiting to be announced. Every reader should see that his subscription is renewed or that a standing order is placed with his Meccano dealer.
Photographs Wanted.
As mentioned in the last issue of the "M.M." I am always pleased to consider photographs for ptblication in these columns and to pay for those that are used. Numbers of photographs are submitted from time to time, but the work is not of a very high atandard. With a view to further encouraging followers of the hobby I am announcing a Photographic Competition in this issue and I trust that all Meccano boys who have cameras will enter.
Honour for Mr. Hornby.
I feel sure that readers of the "M.M." will be pleased to know that our Managing Director, Mr. Frank Hornby, has been elected President of the British Toy Manufacturers Association.

## A Photographic Competition

GET OLT YOLR CAMERA!
There is no more interesting hobby than photography and now that summer is approaching there will be renewed activity in the dark room.

With a view to en." couraging Meccano boys in this direction we announce a Photographic Competition. The First Prize will be a No. 1 Hornby Clockwork Train set, the Second Prize a Tin Printed Clockwork Train set. The Competition is divided into the three following sections.
(1) ARCHITECTURAL (photographs of churches,
(2) NATURE STUDY (photogra
(2) NATURE STUDY (photographs of birds, trees,
(3) MISCELLANEOUS
(3) groups, machinery, engines, etc.) views, groups, machinery, engines, etc.).
There are no restrictions whatever. Any type of camera may be used and photographs may be of any size and finish. Any number of entries may be submitted. The photographs will be judged on pictorial merit, technical skill and finish and a small photograph stands an equal chance with a large one.

Entries close on July 1 for the United Kingdom and September 1 for Overseas readers and the winning photographs will be published in the Meccano Magazine. Each competitor should write clearly his name, address and age on the back of his photograph. Although the photographs must be taken by the competitor, the developing and printing need not necessarily be done by him. The entry should, however, state whether the photograph is the competitor's sole work throughout (that is taken. developed and printed by him) as this will be taken into consideration when making the award. A further special Holiday - Essay and Photographic Competition will be announced in the July "M.M."


## New Meccano Parts.


578. Loaded Hooks. ..each 5d. 136 Hand-rail supports (with nuts) " 3d.


## Useful Wheels

We have a number of pressed wheels suitable for trollies, carts and other models. Our stock is limited and our readers are advised to take advantage of this offer immediately, as the stock will quickly be exhausted.

Road wheels, $2^{*}$ in diameter, with collar and set screw. Price per set of four-9d. post free

Double Symmetrical Points.

(For 2 ft . diameter circle).
each-s. d.
DSR1 (1ft. radius) ....Right 40
DSL1 ( $\quad$ ) .. ..Left 40
(For 4 ft . dinmeter circle)
DSR2 (2ft. radius) .. ..Right 40 DSL2 ( , ) ...Left 40

## Good Things in Store.

We feel sure our readers will be interested to hear that our future issues will contain many good things, amongst which are in-cluded:-
"THE LATE SIR ROSS SMITH AND HIS WORLD-FAMOCS FLIGHT."
" meccano in a german prison camp" (by a British Officer).
" HOW MECCANO HRLPED TO INVENT A MOTOR CYCLE" (hy Lt.-Col. Mc Kechnie).
" THE NEW PACIFIC TYPE G.N. LOCO."
"THE MAJESTIC, THE LARGEST LINER IN THE WORLD."
HOLIDAY iESSAY AND P PHOTOGRAPHIC COMPETITION.

## Clever Young Journalist EDITS The Star.

We have pleasure in publishing a photograph of Master Alexander C. Forrester, of Loundoun House, Maxwell Park, Glasgow.

Master Forrester is publisher, editor, printer and distributor of a one-man magazine called The Star, issued every month.

The Star-one of the brightest results of amateur journalism we have seen-contains 22 closely typed pages, with a 12 page advertisement supplement. It is artistically


MASTER A. C. FORRESTER IS A KEEN MECCANO BOY.
illustrated by line and water-colour drawings, contains adventure stories, school stories and many other interesting items.
Master Forrester is to be congratulated not only on the quality of his publication but also on its long life, for it has been issued without a break since April 1919. He takes a just pride in the fact that The Star has never been even one day late in coming out.

Master Forrester has our every good wish for a long continuance of his work and a successful future for his magazine.

## The British Industries Fair.

## H.M. THE KING ADMIRES MECCANO

Most of our readers will have read of the great British Industries Fair held at the White City recently and we are sure that every Meccano boy wishes he could have seen the wonderful toys there exhibited. All the latest productions were shown, including many wonderful novelties, particulars of which cannot be given at present as they must romain secret until they are seen in the toyshops next Christmas.

The extent of the exhibition may be judged from the fact that if all the stands had been placed in a straight line they would have extended for $3 \frac{1}{2}$ miles. Over 200 tons of timber and 15 tons of nails were used in their erection !
Meccano, Ltd., were of course represented, a splendid display of models and Hornby Trains being exhibited. H.M. the King paid a visit to the stand and admired the Meccano model of the Forth Bridge over which Hornby Clockwork Trains were running. The extreme strength of the permanent way over which the trains ran was revealed when one of the Meccano representatives (who weighed over 11st.) stood upright on the rails crossing the bridge.


These columns are reserved for dealing with suggestions sent in by beccano users for new parts, new models and new ways of making Meccano model-building attractive. We ars alvays pleased to hear from any A.eccano bov who has an idea which he considers will be useful in the
Meccano system. Meccano systom.

Steven Franklis (Chiswick).-Up to the present we have discovered no use for a curved slotted strip. The purpose is served by our present $2 \frac{1}{*}^{\circ}$ curved strip. A self-centring chuck on the lines you suggest would not be possible with existing Meccano parts. It would have to be made specially and the great expense would not be justined. See our reply to J. C. Hill.
Noryax Wallis (Gulgong, N.s.W.).-Perhaps some day we shall turn to the manufacture of boats, Norman, but not yet awhile.
N. STEPPHEN (Aberdeen). -All our Models are under complete revision. Model No. 43 is now Hitted with two guide ropes. Our No. 2 Manual contains models covering all Outfits. Regarding your dificulty with Model So. 50, we suggest you wait until our new $0-3$ Manual is ready. The detail given is very clear and should require no special description. Johis W. Darlisg (Delamere, Shanklin).-A clear description of the lock-nutting principle is given in diagram $D$ at the back of the complete Manual, page 129. Its employment is shown in diagram $N$

HugR Rowland (Middlesboro').-Our rails are being made adaptable to most existing makes of rails.
Frank Barling (Hythe).-See our reply to D. W. Richardson, Hastings, re circular saw.
WM. L. Syith (Bootle).-See latter part of our reply to B. Ruck, Swansea.
J. W. Trigasan (Ealing, W.) -We think existing Meccano parts could be adapted to the two shapes vou suggest. The feature of Meccano is its adaptability.
Andy Stenning.- We are afrald we cannot see any advantages to a $6^{\circ}$ diameter gear-wheel. Have you lound any uses for the slotted angle girder ?
J. L. CASDLET (Tulse Iiili).- We think your trapesoidal braced-girder has only one specific use. We design all our parts for standard use as far as possible.
V.G.80uJH (London).-A double tlanged plate, such as you suggest, may have some use and we shall conas you su
sR. Anderson (Palmerston, N.Z.).-We propose issuing a separate flange for attachment to the face plate for making engine driving wheels. With the addition of the threaded boss to which the connecting rod may be fixed, a very good representation of a driving wheel can be made
W. A. BRCKETT (Birmingham). -We shall consider your suggestion for half circle bent plates to forin cylinders, etc.
Alec J. Bisxig (Wadsworth). -We would suggest that you use a pivot boit to form a bearing for connecting coupling strips to your flanged wheels. We aiready have under consideration your suggestion for double crank.
E. JORDAS (London). -We are always pleased to have suggestions and shall consider the eight-wheeled corridor (as an addition to the Hornby train system) and also your other suggestions.

1. BONFIELD (Hull).-We consider the present sprocket chain is quite strong enough. If it were as you suggest, it would not engage correctly with the as you suggest, it would not engage correctly with the eeth of the sprocket wheels. Ralis with wooden alcepers have not the same stability as those of our to tnass production.
A. Tensyson (Rotherham). -Such a strip as you mention has an ornamental use only. We endeavour to adapt parts to general use.
W.R.FAIRWEATHER(Lozells, Birmingham).-Although the curved braced-girder would have its uses coninned more or less to bridges we shall give it consideration.
Jack Royds (Reading).We do not see the point in your suggestion for a coupling fitting the winding spindle at one end and a rod at the other. In de signing a model containing a clockwork motor the position of the motor can generally be so arranged as to make it ac cessible to the ordinary winding key.
J. Dosald (Uddingston). Any photographer would sup ply you with the information We could not enter into the subject through the medium of the "M.M."
LEWIS COLEE (Wantage).We are shortly, placing on the market various types of trucks and two-way points.
J. D. RowiEx (Greenwich) - We'have already added addi tionaljlengths of screwed rods to our list.
alas L. A. Viner (Coven-try).-We do not think a split bearing such as you suggest would be practical, but we shall give it consideration. We have under consideration the introduction of helical-gear wheels which we think will meet your purpose.
Herbert Mossman (Hammersmith).-We illustrate a Model Tank in our No. 2 Manual and we presume your suggestion for tubes is to represent guns. We shall consider the matter.
BERSARD Hordes (Battle, Sussex).-Your list of suggestlons covers so wide a fleld that we are afrald we cannot reply in detall. Some of them have their polnts and these we shall consider.
Robert J. Cayp (Walworth, S.E.).-As we think your suggested shoulder bolt miglft be usefin under circumstances requiring locking nuts we shall certainly consider it.
R. Wolfs (Wolverhampton).-The principle shown in your sketch is precisely the same as that of the Meccano Charging Board. We shall deal with this subject when our electrical Manual comes under subject
R. 8. ElijaH (Dharwar).-Flat strip brushes are unsatisfactory for use with motors requiring power: Further, they quickly wear ont through constant sparking.
Thomas Spencer (Bury).-It will not be a difficult matter for you to make a slight alteration in the construction of the jib top to accommodate the Iin. pulley wheel.
G. Slairmayd (Darlington).-A compression spring can be made by extending the present spring. We are re-designing the clock movement and hope to have this ready shortly.
Gilbert Wilks (Maida Vale).-A $6 \frac{1}{i} \mathrm{in}$. rod may be made by a $4 \frac{1}{i}$. and 2 in . rod joined by a coupling. made by a ${ }^{\frac{4}{i} \mathrm{in} \text {. and } 2 \mathrm{in} \text {. rod joined by a coupling. }}$ We scarcely see any advantage over our pre
wormwheel in a wormwheel to fit a lin. pinion.

Harold Grey (Farnworth, near Bolton).-Perhaps some day we may issue longer strips to correspond with the long girders. The crank is weakened by placing a hole in it. We suggest gripping the end of the cord by means of a clip or attaching the cord to a collar.
Leslig Stables (Keswick). -The clockwork movement in the Hornby engine would not be sufficiently kpowerful to drive Jeecano models.

## An Electric Generating Station.



The above interesting photograph (contributed by Master Alan Russell, ef Market Rasen), illustrates a line of alternating current dynamos in the Summer Lane Electric Generating Sub-Station at Birmingham. The dynamos are driven by Belliss Triple Expansion engines and the station is mainly used for supplying current to the trams in the city.

## The Great Western Railway Locomotive "Princess Mary."


H. Trickwell (St. Martin's, Guernsey).-We
 These have more possibilities than your suggested rod threaded only at the ends.
Q. H. O. Harriks (Frinton-on-Sea).-We are at present designing a clockwork motor on the lines of a gramophone movement. This will have the advantage of greater power and length of run. We shall consider the possibilities of your suggestion regarding concentric gears: We announce in this number a fiange serve the purpose of your suggestion embodied in serve the
Tack Case (London, S.W.).-We propose introducing various train accessorics this year.
H. C. Hastivgs (London).-The 3in. pulley wheel makes a very suitable motor-car wheel with the addition of a rubber ring to represent a tyre. This is illustrated in our special leaflet of the Motor Chassis model.
©Eric Marriage (Witham, Fasex).-Your suggestion for a curved rack strip appears sound. We shall be interested to see its application in the model you are making for the competition.

Ernest Miller (Glasgow).-Your suggestion for a right angle bracket will recelve consideration.
B. GreEENHILL (S. Woodford):-Does your Arst suggestion refer to a bush wheel or a pulley wheel ? If the latter we already list $2^{-}$and $3^{\circ}$ pulley wheels. If the former, what advantages have you found it to possess over our present bush whee or face plate? any advantages over our present 1 - roller ?
K. TEMPLE (Ludlow).-We shall consider your suggestion of a double crank shaft. Incidents of screws awkwardly placed are scarcely numerous enough to warrant the introduction of a special tool for dealing
with them. with them.
R. Harrison (E. Molesay).-We adopted cord stays, etc., as being much easier of employment than wire. (Continued on page 8.)

Our illustration shows the fine G.W. loco "Princess Mary." To this loco was allotted the happy tasl of conveying H.R.H. Princess Mary and Viscount Lascelles from Paddington to Shifnal, after their wedding. The train consisted of five coaches and it is an interesting fact that the preceding train out of Paddington was drawn by the engine "Prince of Wales" and that the one following the "honey-moon train", was drawn by the "Prince Albert."


The Secretary's Notes.

Now that the light evenings are

The Close of the Winter Sessions here, attention is again turned to outdoer pursuits. Meccano boys are naturally healthy boys and the bright sunshine lures them to the woods, to camp; to the river, to row, to swim and to fish; to the cricket field; to the road, to cycle or to walk and to all the other joys of life that call to boys when the days are fine.
The last two sessions have been splendidly successful and all Club members throughout the country have worked hard for the good of their Clubs. Most of you intend to carry on during the summer months and I hope that all your Sports Clubs, Rambling Partics, Pienics, etc., will be as much enjoyed is have been the pursuits of the recent busy indoor sessions.

I hope that all those Guild The Photo- members who possess cameras will graphic enter for the Photographic ComCompetition petition announced in this issue. The scope of the competition is unlimited. If you are a lover of old castles, churches or abbeys, send in your entry under the "Architectural Section." If you study the ways of birds or the beauty of trees and flowers, your entry should come under the section of "Nature Study." If on the other hand you are more interested in the rattle and roar of machinery, or any of the other thousand-and-one subjects which cannot be classed separately, forward your entry under the "Miscellansous Section."

As announced in the last issue of Club Mem- the Magazine a further supply of bership membership cards was printed owing to the repeated number of requests I received for them. This supply is now practically exhausted and if there are still any Clubs without cards they should communicate with me without delay. When these membership cards are exhausted it is not intended to print more, until the commencement of the next winter session. By the end of the summer I hope
Iectures
for
Meccano that a number of interesting lectures will be available for the use of Meccano Clubs. The Clubs lecture Lives of Inventors proved very popular last winter and I hope to be able to add others. Further information concerning these will be published in these columns later on. I have several times had occasion A Warning. to warn Guildmembers against begging letters received from abroad, and as the practice seems to be on the increase I am again mentioning the matter. The letters come principally from
native boys on the West Coast of Africa who see the names and addresses of Meccano boys in the Meccano Magazine, either as prizewinners or in connection with the Guild. Sooner or later they ask for presents of fountain pens, silk handkerchiefs, etc., and offer to exchange native baskets and monkeyskins. I advise all Meccano boys to ignore communications of this type. If any doubtful correspondence is received it should at once be forwarded to me.

## The Inter-Club Model Competition.

## Successful Entries.

It is with great pleasure that I am able to announce the result of the above Competition which closed on March 31. As in previous years the entries submittedithave been of a very high standard and the difficulty of adjudication has been considerable. As three of the models submitted are of almost equal excellence it has been decided to combine the two awards of $£ 5$ and $\mathrm{E3}$ and to divide the sum between the three Clubs concerned.

The successful Clubs are:-New Malden Meccano Club (" Travelling in Three PeriodsPast, Present, Future "); Kilmarnock (Riccarton) Meccano Club (" The Forth Bridge ") : and Norwich Enterprize Meccano Club (" Meccano Town").


## travelling in the past.

The New Malden Meccano Club's entry illustrates early methods of travel when journeys were made by stage coaches and, later, by early railways-represented by a model of the famous "Rocket." Travelling in the present progressive age is illustrated


## TRAVELLING TO-DAY.

by means of such services as char-a-banc, electric loco. and motor cycles and side cars. The conveyances of the future are represented by the aeroplane, helicopter, and monorail.

The Kilmarnock Meccano Club's model of the Forth Bridge, a very fine structure, is designed somewhat on the lines of the illustration appearing in the No. 22 Magazine.

The "Meccano Town" of the Norwich Enterprize Meccano Club is a complete reproduction in miniature of a busy town. A


TRAVELLING OF THE FUTURE.
transporter bridge spans a river on which a barge and a steam tug are busily at work, with a sailing ship looming in the distance. On the river banks, gigantic cranes lift and lower their loads, while the town itself includes such details as a railway station, tramcars, and even a church surrounded by grounds laid out with grass and sanded paths.

Many other interesting models were submitted, and of these the following are honourably mentioned:-Hammer Head Crane (Jarrow-on-Tyne Meccano Club), Aeroscope (Parkstone Congregational Meccano Club) and Aerodrome comprising Aeroplanes, Aeroplane Hangers, Searchlights, etc. (St. Thomas (Exeter) Meccano Club.)

## Special Merit Medallions.

In the last issue of the " M.M." I announced the award of Special Merit Medallions to twenty-seven Club members, who gave interesting leotures or rendered special service, to their Clubs during the past session. If have pleasure in reproducing two further photographs of winners of these Special, Merit Medallions. Two Medallions are allotted to each Club each session and I hope to announce further awards in the next issue of the ". M.M."


Master Barton Warburton. the energetic Secretary of the Liscard High School Meccano Club, who won his Special Merit Medallion on the recommendation of the Club Leader for good all. round service to the Club, extending over several sessions.

Master W. Grindley of the St. Mary-with. St.Gabriel Meccano Club was awarded the Special Merit Medallion for delivering two very excellent lectures on Prin. ting Machines. He is shown wearing his Medallion.


## Club Notes.

Bute (S. Australia) M.C.-Some very interesting lectures werefgiven last session by the Rev. F. Barnes and Master Bryant. The balance insthe bank is increasing rapidly and altogether very favourable progress is belng made. Secretary: Master F. Barnes, Bute, South Australia.
Leasingiox M.C.-Continues to make excellent progress. As it is the Club Leader's belief that "Enthusiasm runs the show" there is no lack of spirit In this Club. An exhibition and concert was arranged to conclude a most successiul session. To this was invited the President, Lieut.-General Sir John Keir, the members of the Leanington Juvenile Committee and parents and friends of the members. The company were deilghted and surprised by the memberx display akill demonstrated by the splendid models. An impromptu concert included part songs, recitations, impromptu concert included part songs, recitations, vocal and instrumental music. A Cinema cntertainincluding The Gaumont Graphic, The Opal's Curse, and Ham or the Harem. A Sports' Club has been arranged for the summer months. Secretary: Master G. M. Hare, 26, Willes Road, Leamington.

BCCKPastLKIGH M.C.-The members have had a some enjoyable outings during the summer months. Rambles, plenics, and cycle runs are being arranged. It is hoped to produce the play Nonsense Nana in the open air some time this summer. Secretary: Master St. THOMAs (Exeter) M.C.-The programme for the past session included games ovenings, model building and a number of interesting lectures. Major Rodweil who takes a great interest in the Club work (and has given lectures on more than one occasion) has kindly offered to allow the members to hear a Parisian Wireless Concert. In addition, enjoyable afternoons have been spent in football and it has been suggested that next year the Club should enter a team in one of the minor leagues. Picnics, cricket, and visits to local places of interest have been arranged for the summer months.
Secretary: Master C. I. Bowyer, 5, Silver Terrace, Richmond Road, Exeter.
Liscard High School M.C.-Has made splendid progress. Popular lectures have been given by Mr. Samuelson on "Electric Cars," "The Motor Cycle" and "Electricity." The session ended with a good balance in hand. Secretary: Master B. Warburton, 11, Brisbane A venue, New Brighton, Cheshire.
Weltavrades (Java) M.C.-The enthusiasm of this Club continues to increase and the membership now stands at thirty-three. The work of the Club has attracted the attention of an inspector of one of the ocal Secondary Schools who is contemplating the ormation of Clubs in connection with the Secondary Schools of Java. Secretary: Master R. E. Pilet, Raden Salehlaan 54, Weltevreden, Java, Dutch East Indies.
Knutsyord Lecture Hall M.C.-The first meeting of the Club was held in the Knutsford Lecture Hall on 20 January last. The first session, which has been very successful, included an interesting lecture on "Natural History" by the Leader. The session closed with a social evening at which tea was followed by a competition. The winners were Masters $G$. Merril and L. Shepherd. Secretary: Master L. Shepherd, Grove Lodge, Poft Road, Knutsford.
Carshalton and District M.C.-Have had a very enjoyable session, although the attendance has been low during the concluding meetings. Interesting lectures spread over three meetings were given on $"$ Electricity" by the President. A lecture on Practical Bee Keeping " by a local gentleman was Illustrated by lantern slides, Leader and Secretary, Mr. E. H. Atkins, 46, Mill Iane, Carshalton, Surrey. Sxali Heath (Birmingham) M.C.-The session finished with a most successful exhibition and concert the whole programme being provided by members with the exception of the planist. The Club motto is "Be thorough in all you undertake to do, even If it is the negative action of sitting quiet to give others a fair chance" and all the members are doing their utmost to live up to it. Arrangements are being made for outings during the summer months. The Club are greatly indebted to Miss Edge, who has helped considerably in carrying on the meetings and In the Club work generally. Secretary: Master W Edge, 131, Whitehall Road, Small Heath, Birmingham ST. Davids (Tonyrefail), M.C.-The session closed with a successful exhibition and it is hoped to arrange a cricket team for the summer months. Secrelary Master W. F. Woolcock, 14, High Street, Tonyrefail. Gr. Tothas (Witham) M.C.-After two successful sessions it has been decided to hold meetings once a month during the summer. The members are keen and enthusiastic and it is hoped to produce the play Nonsense Nana very shortly, Secretary: Master D. Barber, Oak Cottage, Great Totham, Witham. Essex. ToNBRIDGE M.C.-To this Club is due the honour of having the first printed Club magazine. In a very interesting four page number I read that "On Tuesday evening of each week members of the Meccano Club, under competent leadership, may be seen busily erecting models of original design, or discussing model already built. Those who have watched the rapid growth of the Club cannot but be convinced of its popularity. The Club has now been in existence for two years, and has a roll of over forty members. This rapid growth has necessitated a removal from the old
Clubroom in Barden Road." I congratulate the Club Clubroom in Barden Road." I congratulate the Club
on Its growth and its continued enthusiasm, and welcome the appearance of this new Club magazine. Secretary: Master W. Struckett, 23, Woodfield Road Tonbridge, Kent.
Norwich Esterprize M.C.-The last session was more successful than any before and in addition to the summer programme of picnics, rambles. cycle runs photographic excursions and competitions, cross country runs, etc., it has been decided to hold regular meetings once a month. Secretary: Master J. Trevo Sutton, Burlingham House, nr. Norwich.
ST. Mary WITH St. Gabriki. M.C.-A new Secretary has been elected in the person of Mr. Curle. The winter session has been more successful than any held hitherto, and there is every prospect of this success being maintained. Secretary? Mr. C. Curle, 37, Pullens Buildings, Peacock Street, iondon, S.E.
ST. CEDDS (London E16) M.C.-This Club continues to make good progress. Model building evenings have been very popular although quite a number of have been competitions have been held also. Secretary: Master S. Elliott, 142, Beckton Road, Canning Town London K. 16 .

Manokhamilitox M.C.--kxcellent progress has been made throughout the last session and the attendance has been good. A very successful concert was held towards the end of the sexsion. Secrefary: Master J Leonard, Main Street, Manorhamilton.

## Clubs recently Affiliated.

ORMSKIRK WOLF-CUB M.C.-Started in connection with the Wolf-Cub Pack of the Ormskirk and District Boy Scouts Association, this Club has made an excellent beginning. An Exhibition is being arranged for ist April, at which it is proposed to illustrate the Coaling Industry, and among other models will be a working mine in miniature, Secretary: Senior Ro
Mate Chas. Walsh, 111, WIgan Road, Ormskirk.

Buckpastleigh M.C.-This Club was formed in December last with 15 members, and rapid progress is being made. Secretary: Master H. Parsons, Bell Cottage, Buckfastleigh.
Jarrow-on TYNE M.C.-Originally founded some months ago, this Club has now qualified for affliation. The last session was very successful and an exceedingly interesting Lecture was given by Master G. H. A. Murray on "The Planets," for which he was awarded a Special Merit Medallion. Secretary: Master G. Stevens, Gorden House, Field Terrace, Jarrow-on-Tyne.
Manorhamilton M.C.-Although this Club has been In existence for some time it has only recently become affliated. The members hope to perform the play
Nonsense Nana in the near future. Secretary: Master Nonsense Nana in the near future. Secretary: Master
J . Leonard. Main Street, Manorhanilten, Oo. Leftrim, J. Leona

Onservatory (South Africa) M.C.-This Club, mentioned in the last issue of the "M.M." has now become affliated with the Guild. All the members are keen and enthusiastjc and some good times lie ahead. Secretary : Master W. Barrett, 6, Irwell Street, Observatory, Cape Province, South Africa.
Surbiton Hill M.C.-This Club has made an excellent start and I feel sure that the future will see It developing into one of the finest in the Guild. Surblton Hill.
Griasby Cextral M.C.-The session has Included lectures, model-buildingzevenings and a competition. At present the membership stands at twenty-three and this is very encouraging for a new Club. Secre. tary: Master Vernon Perry, 37, I.ittlefleld Lane, ఏGt.

## irimsby.

Rolleston (Burton-on-Trent) M.C.-The present membership is thirteen and the members are keen and enthusiastic. There is every prospect of the Club being very successful. Secretary: Master Phin Toon, Sherbourne House, Tutbury Road, Rolleston, Burton-on-Trent.
Huntspill M.C.-The Rev. C. F. Pizey of the local Church has kindly consented to become the Club Leader of this Club and as the boys are very enthusiastic everything promises well for the future of the Club. Secretary: Master A. Hunt, West Huntspill, nr. Bridgwater.
OAKLANDS (Motherwell) M.C.-With an enthusiastic Club Leader and enthusiastic members the prospects of this Club are indeed bright. The members are very interested in the Recruiting Campaign. Secretary Master L. A. Ford, Oaklant, Catherine Street, Motherwell.
Kilmarnock (Riccarton) M.C.-Although only recently affiliated, this Club has entered a very fine model for the Inter-Club Model Competition. Good progress has already been made in every direction. Secretary: Master X. Tinno
Riccarton, Kilmarnock.
Russell. Town (Bristol) M.C.-Established in connection with the Russell Town Congregational Sunday School and thirteen members were enrolled on the frst night. A Ane Meccano competition was organized In connection with the Church Bazaar at Easter Secretary: Master A. Palfrey, 16, Church Road, Redneld, Bristol.
SHIPBOURNE (Tonbridge) M.C.-Started with the help of the Tonbridge Meccano Club good progress has already been made, and a joint exlifibition held on March 22 was very successful. Leader and Secretary. Mr. W. C. Cooksey, Marchurst, Tonbridge, Kent. Guloong Public School Boy Mechasics M.C. (New South Wales)-Established in connection with the above school, the memibers meet regularly at the school. There is every prospect of this Club developing
into one of the finest in Australia. Secretary: Master N. Wallis, "Yarrawin," Gulgong, New South Wales, Australia.

Club not yet Affiliated.
Felingoel. M.C.-A very promising Club has ccently been established in Felinfoel and I hope soon recently been extabished in Felinfoel and thope soon to have the pleasure of afmiating it with the Guill,
In the meantime, any boys desirous of joining shouli, In the meantime, any boys desirous of joining shoni, "Ynyswen," Felinfoel, nr. Llanelly.

## Meccano Club's Printing Press

## AT KENYON HALL COLLEGE

The members of the Kenyon Hall College Meccano Club are fortunate in that their studies include several practical subjects, one of which is printing. Kenyon is fourteen miles to the west of Manchester and the principal, Dr. J. Mastin, is also the Leader of the Meccano Club.


## CLUB MEMRERS WITH THEIR PRINTING PRESS.

The above photograph shows three of the members at work with the "Adams" hand press. This machine is capable of printing up to foolscap size and the boys print their own notepaper, envelopes, postcards, circulars, etc., turning out some very excellent work. They also receive instruction in such practical subjects as the use of the soldering iron, mending leaks in pipes, fixing washers on taps, and learn to sole and repair their own boots with the aid of a complete bootrepairing outfit installed at the College.
The motto of the Club is Si je veux, je peux ("If I will, I can") and this spirit imbues everything the boys undertake.

Sport is also a great feature of the Club including gymnastics, boxing, fencing, cricket, football, hockey. 'tennis, croquet, bowls, running, ete., under the supervision of Dr. Mastin, who is himself an athlete.

Masters J. W. Mayhew and J. S. Kelsall, two of the members, were recently awarded Special Merit Medallions.

## Play-Writing Competition.

Entries are being received for the Playwriting Competition announced in the last number of the Meccano Magazine. The closing date of the Competition is May 30, 1922, so that there is yet time for any one interested to enter. Cash Prizes to the value of 55 will be awarded for the best efforts submitted with further awards for others showing special merit. It is important to remember that bare outlines for plays should not be submitted for this Competition. The play should be fully written out and arranged as nearly as possible on the correct lines. The scene and plot may be laid anywhere, although the play itself should in some way turn or bear upon Meccano.

## Zulu Clockwork Trains.



Fine and durable mechanism and strength of construction of all parts are the main characteristics of this new type of clockwork train. The Zulu is a well designed and efficient luco which will give excellent and long service. Richly enamelled and highly finished; fitted with brake and governor; non-reversing.

Each set contains Loco Tender, two passenger Coaches and set of Rails, including a two-foot diameter circle and two straights. Gauge $O$, in black only.
'rice 25/-.
ZULU PASSENGER SETT

Zulu Goods set as above but containing one wagon in place of passenger coaches.

Price 18/6.

| Zulu Locos |  |  |  |  | $\mathrm{d}_{6}$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Zulu Tenders | . | .. |  | " | 2 |  |
| Zulu Passenger | Coaches |  |  |  | 5 |  |
| Zulu Wagons |  | . |  |  | 3 |  |

## Zulu Tank Loco.

A strong and durable loco capable of any amount of hard work ; richly enamelled and highly finished; fitted with brake and governor ; non-reversing. Gauge $O$, in black only. .. .. .. Price 12/-


## Guarantee.

The Zulu Train is tested and its efficiency is guaranteed. A form of guarantee is furnished with each loco, in which we undertake to repair or replace it, at our option, if it fails to run satisfactorily from any other cause than misuse, within 60 days of date of purchase.

## Clockwork Train Accessories.



Gauge 0.
PETROL TANK
WAGONS
In red, lettered gold. each 3/6


BRAKE VANS
Finished in colour to represent G.N. \& L.N.W. sys. tems .. .. each 4/-

CEMENT WAGONS
Enamelled in colour,
each 4/6


GUNPOWDER WAGONS
Finished red .. each 4/-

SPRING BUFFER STOPS
Enamelled in colour.


# The Late Sir Ernest Shackleton 

HIS ADVENTLRES IN THE ANTARCTIC

(concluded)
Shackleton next sailed for the South in the Endurance, leaving England before the outbreak of the war in 1914. It was decided to spend the winter in the Weddell Sea. Here terrible difficulties were encountered. The ship forced her way for over 1,000 miles through the pack-ice, but at last she became immovably fixed in the ice, drifting with it.


Photo by courtesy of 1
[Mr. Wm. Heinemann
THE ENDURANCE FROZEN IN
The ice piled itsclf up to a height of 20 ft . close to the ship. the pressure steadily increasing meanwhile and blocks weighing 20 tons were constantly thrown on to the ship. Sledges were placed on the deck with stores of food and the dogs were got into training, in case anything should happen to the ship.

## THE LOSS OF THE ENDURANCE

On one occasion the Endurance was thrown on her beam ends in ten seconds by the movement of the ice. Eventually the pressure of the ice was so terrific that it crushed the ship, pushing out the stern and forcing the deck forward. By the courtesy of the publisher of Sir Ernest's famous book South (which every bov should read) we are able to reproduce a photograph of the Endurance as she appeared after thus being crushed by the ice.


THE SHIP AS SHE APPEAREDCRUSHED BY THE ICE

After the digaster to the ship the crew landed on the ice and made an ocean camp and, having taken off all the scientific records, photographs, etc., it was decided to abandon the ship. Soon after this decision had been made the Enturance sank, leaving the camp isolated and floating on the ice. Fortunately the explorers had taken the precaution to keep with them the small boats and for two months they drifted on the ice. As soon as the ice broke up, however, they took to the boats and attempted to reach land. The
nearest point was 346 miles distant and it was not reached until the following April when the voyagers landed on Elephant Island, after incredible hardships including intense cold, long nights, heavy blizzards, shortage of fuel and worn-out tents. Despite these difficulties the men were not discouraged for Sir Ernest kept up their spirits.

## A DARING VOYAGE IN AN OPEN BOAT

After a brief respite he set out, with five volunteers, on what seemed an impossible voyage in an open boat, to obtain relief. Theit objective was South Georgia and for 14 days they were constantly drenched with icy water and had to battle with snowstorms and gales. At last they sighted land, but they were so exhausted that it was not until a week later that Sir Eirnest and two others were able to proceed on the second stage of their journey. This entailed a 36 -hours' continuous scramble over glaciers, mountain ridges and snowfields, at a height of over $4,000 \mathrm{ft}$. above sea level. The distance across the island was 30 miles and this was the first time it had ever been crossed.

The outposts of civilization were at last reached and a whaler from South Georgia took Sir Ernest to the Falkland Islands. From this point relief was sent to his three companions, who were brought in. "It was the Chilian Government," Sir Ernest wrote, " that was directly responsible for the rescue of my comrades. This Southern Republic was unwearied in its efforts to make a successful rescue and the gratitude of the whole party is due to them."

The expedition did not reach the Pole but in many ways it did important work of great scientific value, especially in clearing up the mystery of the Weddell Sea, previously described as being " the least known of all the scas."

## THE PRESENT EXPEDITION

One of the most remarkable facts regarding the present expedition is the small size of the boat chosen for the voyage. The ship, aptly named the Quest, is a trim and stout little craft of only 125 tons. Of her Sir Ernest wrote: "Should anything happen in the ice it will have nothing to do with any. thing wrong with the ship. The ship is all right." She is equipped with the most modern scientitic apparatus including a wiresess telegraphic and telephonic installation and also carries a seaplane.

## EARLY TROUBLES

On the first part of her voyage she encountered exceedingly rough weather and across the Bay of Biscay had to battle with the enormous seas and heavy gales. At one time Sir Ernest did not leave the bridge for five days together. At another, the sea was so rough that no food could be cooked for many days, for owing to the violent motion of the ship no liquid would remain in any open-mouthed receptacle. Two of the crew became seriously ill from continual sickness and later were obliged to return home. This was not all, however, for the Quest experienced engine trouble and although a tug was sent from Lisbon to assist her, it was unable to face the mountainous seas and the little ship had to struggle to the shelter of the Tagus alone. After repairs had been carrfed out the Quest set off again, encountering even worse weather on her way to Madeira. Subsequently further engine trouble developed, and on reaching Rio de Janeiro new masts were fitted and other repairs effected. The Quest left Rio on December 17 last and it was on January 5 following, when the little vessel was off South Georgia, that Sir Ernest suddenly expired.

## "NEVER THE LOST ENDEAVOUR"

In the loss of this gallant explorer every Meccano boy will feel a personal bereavement, for Sir Ernest Shackleton was a great Englishman. Courageous, cheerful and of unfailing


Photo by mourtecy of?
|"The Daily Mirror"
THE IAATE SIR ERNEST ON BOARD THE QUEST

This is one of the last phologrophs taken of the famous erplorer and tras a snapshot obtained on board his ship, when moored in the Thames, a fees hours before she sailed.
resource, he never asked his men to perform a task which he would not have been the first to carry out himself. He shared every hardship with them and never exposed them to unnecessary risk. His determination to "win through" is well expressed in his farewell words to one of his friends

Never for me the lowered banner
Never the lost endeavour."
He was loved by all his men and although he was in name a commander he was always first a friend. We cannot pay too high a tribute to the memory of this great man and his wonderful example of courage, perseverance and determination will for ever remain before us.
(THE END.)

## A Strange Superstition.

Some $\mathbf{2 0 0}$ miles south of Khartoum, a great work is in progress. This is the construction of the Sennar Dam on the Blue Nile. The stone for the Dam is being obtained from the granite quarries of the Segadi mountain. On this mountain are two large stone pillars representing human figures and called by the natives the King and Queen. The native Soudanese are Mohammedans and have a queer superstition that these two monuments are good spirits. Engineers have to exercise great care when blasting the rock so that nothing shall happen to the King and Queen, for any accident would be serious. The natives believe that should they be injured disaster would inevitably follow.


## Our Mail Bag.

In this column the Editor replies to letters from his readers,
from whom he is always pleavei to bear. He receives hundreds from whom he is always pleavei io hear. He recives hundreds
of letters each day ant only thone that deal with matters of of letters each day and only thone that deal with matters of
genefal interest can be dealt with bere. geperal interest can be dealt with bere.
Correspondents will hrip the Editor if they will write neatly
in ink and on one sile of the paper only.
J. C. Palmer (Uttoxeter),-Your riddle in rhyme is quite well constructed, but the answer is very obvious and most Meccano boys would guess it at
once. We shall be glad to receive your article on once. We shall be glad to receive your articie on
P. Brindy (Newbridge).-We are always pleased to hear of sucresses gained by Meccano boys and wer congratulate you on passing your musical examination with such a high percentage of marks. We hope you will have a similar success in your woodwork examination. Many thanks for your kind wishes.
Mr. Pegcy Parz (Bearwood).-We hope that your non's enthusiasm for Bleccano does not worry you too much. We are quite sure that you appreciate the good which will result from his lleccano training and trust your efforts to form a Meccano Club in your neighbourhood will be successful.
H. Heank (Gosport).-It pleases us very mnch to know that the knowledse you have acquired in listening to the jectures at your Meccano Club has been the means of your gaining surh a splendid snccess in your science examination. It is just this side of the Meccano Clubs' activities that our secretary is so anxious to cultivate. Scores of interesting and helpful lectures are being given to Meçano boys every week dur'ng the winter months.
Mr. A. Bakzaclovari (Bournemouth).-We are far from grudging the time we spend in writing to boys. We know that they very much like to hear from us and we endeavour to make our letters as helpful and interesting as possible. Your boy's letters to us are always welcome.
B. FisHRR (Bournemouth),- You will find an announcement of a special binder for the "Mecrano Magazine " in another column of this issue. Judging from the frequent requests for something of this kind that we regularly receive from boys, we have no doubt that the "M.M." binder will be in qreat demand. Thanks for poetry which we may be able to use later.
J. LOckHART (Handsworth).-Although you are 15 and have a lot of homework and other thinge to do, we think you are wise in keeping up your interest in the Meccano hobby. We are pleased to hear that you are getting along so well at your new school. We hope to be able to put you in touch with a sultable correspondent in France. You have our best wishes for your atrcess in our big model-making competition.
H. A. LaNKEY (Blandford),-A Club Secretary who flies into a temper and throws ink pots around is rather a dangerous Individual and you were no doubt wise in appointing someone clse. We are pleased to hear that your Club is making good progress.
A. Patrerson (Pretoria).-Any Meccano Guild member whose badge has become damaged or lost may have it replaced by sending an application to the Guild Secretary accompanied by 7 d . in stamps. We shall always be glad to hear of the doings of the
Pretoria Meccano Club."
D. JoNEs (Cheltenham).-We shall be very pleased to hear from your friend Rhona any time she carcs to write to us. The Guild Recruiting Campaign is still open and the beautiful medallions are well worth winning and treasuring.
R. G. Hecros (Birmingham).-We have had under consideration the introduction of special frames for the Guild Certificate, but the cost of postage and the risk of damage are so great that the scheme is scarcely practicable. Most Guild members have their certifleates framed locally and no doubt this is the more conomical way.

DONALD Barbere (Great Totham).-
Meccano is a glorions toy
Just the thing for every boy,
From early morn till late at night
A Meccano boy is always bright
If he joins the Meccano Guild
He will with happiness be filled
He will with happiness be filled
For every Guild boy, old or young
For every Guild boy, old or young,
Has tons of pleasure, tons of fun."
We are glad to print your nice plece of poetry. Some day we hope to publish a photograph of the Meccano Factory in the "M.M.". but owing to its situation it is rather difficuit to secure a satisfactory view except from the air.
scarcely necessary for - As yon say, a secret code s scarcely necessary for Meccano boys, but we can
quite understand that cryptography ${ }^{*}$ is, a very quite understand that cryptography is, a very
fascinating study. "Aok arfdt nnill okb gufhy ocro." The code from which this message to us is taken is a particularly interesting one and we wonder ff any Meccano boy is clever enough to discover the meaning of the sentence.
E. TowNshesi (Bournville).-You will find " Meccano Products" this year an even better book than the last edition. It will be full of inspiration for the brainy boy. We are sorry we have not room for your poetry although it reads very nicely.
Bryas Smith (Rathmines). -Thanks for photograph of yourself in your fancy dress. We are not surprised to learn that it has gained you two prizes. You might send on your negative and we will endeavour to find a corner to reproduce your photograph in the M.M."
R. H. Hall (Knaresboro').-Meccano is a purely Finglish toy invented by Mr. Hornby and manufactured in Liverpool. We trust that this information will allay all your doubts and fears.
LFSLIE BENNETT (I.iscard). We are very interested to know that out of 36 hovs in your class, 24 took Meccano as the subject of their essay on "My Favourite Hobby." Thanks for your puzzle which we may use intcr. Evans (Oakville, Ontario, Canada).-We are sorry you have had so much difficulty in obtaining Yeccano parts. You will be interested to know that we have just opened a Meccano Depot at 11, Colborne Street, Toronto, and in case of any difficulty yon mixht write there. Thanks for poetry which is very good. but scarcely suitable for the "M.M."

## Magazine Binder



In response to numerous requests we are introdscing a spring-back binder for " Meccano Magazines." The binder has a strong stiff back, covered with imitation leather, tastefully tooled. It takes a large number of copies and keeps them neat and clean. In black, lettered gold.

Price 3/- each post free.

## Bright Ideas-(roninnued).

G. B. Denty (Bristol)-See reply to A. La Viner on helical-gears. We allow 50 per cent, on old parts in exchange for new.
JACK DAKIELS (High Wycombe).-Why not use the botler and funnel of a Hornby Loco. It is sold separately and may be bolted to a Meccano plate.
Arther hages (Monsley Hill).-It would not be practical to adapt the present Hornby Loco. to a funnicular railway. A specially designed mechanism is necessary for this purpose.
Albert Stacey (East Ham, E. C.).-We shall keep your suggestion in mind for additions to the Hornby irain system. We Intend issuing a petrol tank and buffers shortiy
V. Thomas (Shirebrook).-We do not think the uses of a $U$ bolt aro universal enough to warrant its introduction as a separate part. We are sorry to hear you have hurt your right hand and hope it will soon be better.
PHiliP Brown (Ieeds).-Various articles of engineering interest are inserted from time to time in the M.M." We have in hand an articic on locomotives which will be inserted as space permits.

Jones (Penzance).-As each hole represents half an inch surely it is an easy matter to arrive at the size of the strip.
8. H. THoxpson (Seamore).-Later this year we intend introducing an Electric Loco, of 4 -volts, similar in type to our No. 2 Hornby Loco.
Alec Burnett (Camden Town).- Your Meccano veteran is very ingenious. It is an advantage for our adjudicators to have a photograph or model of entries to the Competition.
John and David Aston (Sandford St. Martin). Most of the parts you suggest are already included in our list. The others will have our consideration
ALBERT TIMs (Hockley).-We shall consider the parts you suggest but it would help us if you were to ive us some (Wea of their application.
C. R. Broad (Wadsworth).- Weare about to introduce a flange which may be attached to our present

Bright Ideas-(continued).
face plate forming a larger flanged wheel than our
No. 20 .
ARTHUR HEaL (Bath).-We are already experimenting with a connection for the crank shaft. further particulars as to the application of the splral spring you suggest.
. C. Hill (Ilkeston).-We doubt the usefulness of your suggested threaded collar. Our face plate may be used as a chuck for a lathe by securing threaded bosses to it.

W, G. Syxoms (Streatham).-We have already Illustrated in No. 18 Magazine a type of sharp pointed pliers which we consider most suitable for folning or separating Meccano Sprocket Chain. We sell eiectrical parts separately and shall endeavour to arrange to have them included with our regular parts in the price revising all the modelsillustrated in our regular manuals and bringing them up to date. After this has been and bringing them up to date. After this has been
done we Intend dealing with the Electrical Manual. done we intend dealing with the Electrical Manual. JohN B. HOOPER (Eastbourne). - We think the boiler It may be purchased separately and may be attached to a rectangular plate.

## New Prices of Meccano.

No.


## Accessory Outfits.

No.


## A Successful Meccano Competition.

A very successful Meccano model-building competition, recently held in Great Yarmouth, by Mesars. T. Fielding \& Co., Ltd., 18, King Street. brought a very large number of entrifs, no two of which were alike. Many of the models proved so ingenious and of so high a general standard that the Judging was indeed a diffenit task. After very careful consideration the prizes were awarded as follows :-

|  | Name | Prize |
| :--- | :--- | :--- |
| 1st | R. Baker | Horizontal Engine <br> 2nd |
| W. Tuck | Steatn Engine |  |
| 3rd | S. Breeze | Meceano Motor |
| 4th | L. | Burman |

After the competition the models were on show in Messrs. Fielding \& Co.'s windows and attracted much attention and were the object of considerable admiration.

## 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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