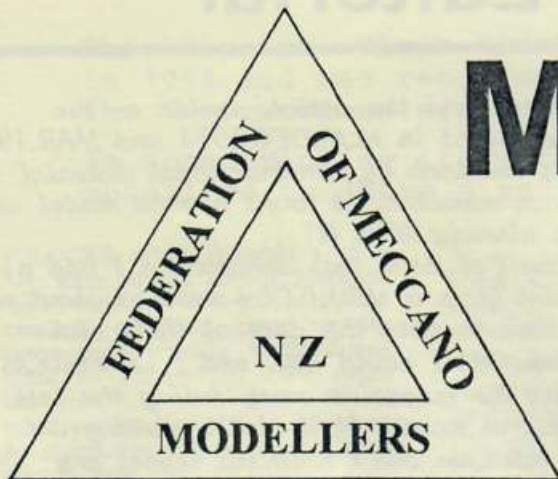
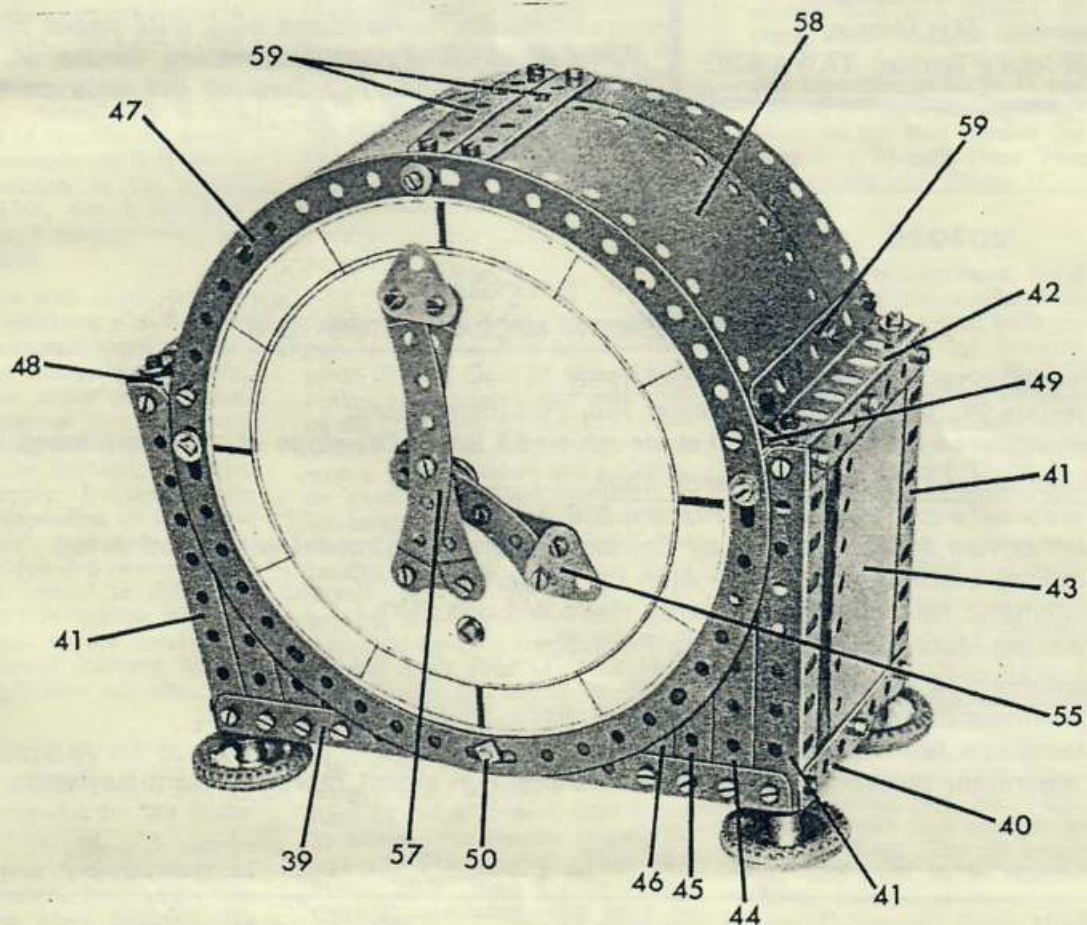




MAGAZINE

Vol 20 No 1 April 1996



MECCANO ELECTRIC CLOCK.

FOR DETAILS SEE INSIDE.

*The aims of this magazine are to unite Meccano clubs
and individual Meccano modellers; to generally
promote and encourage the enjoyment of Meccano*

**NZ FEDERATION OF
MECCANO MODELLERS**

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Editorial

Our frontispiece and the article inside on the Meccano Clock described in M.M.DEC.1954 and MAR.1967 is a reflection on the lack of constructional material at present from our members. It looks a good model and I ask has anyone already built it?

Just after the Feb.issue was despatched I had a telephone complaint from a M.W.T.Club member about not the magazine in time to note the date of their club meeting on 3rd.Feb. All I could say, and I reiterate, is that we try hard to get the magazine away during the last week of every second month. If a club's meeting date is only a few days later, we can't help but regret any inconvenience to members.

REMINDER. Auckland club will again display at Model X at Henderson Recreation Centre at Queen's Birthday weekend, 1-3 June, so get busy on models for this. All the best, Bill.

SELECTED FROM RECENT MECCANO LITERATURE.

International Meccanoman 17 Jan.1996.

Flexible Plate Processor by Roger Hill. Full instructions.

Locomotives in N.Z.by D.Blakeborough and L.Bond. Drawings of various classes.

Constructor Quarterly 31 March 1996.

Three different tractors by Howard Sie

Mother hen and her chicks by Bernard Périer. A fun model with good detail.

Walking Clockwork Motor by Alan Partridge.

Automatic four speed gearbox by Hans van den Burg.

Painting Meccano parts by Alan Partridge.

News mag 74 March 1996.

Christmas Caboose by Don Redmond.

Meccano's first blocksetter part four by Julian Head.

Constructor project 5 Tug of War machine. Fun model reprinted from News mag 6 Aug,1978

New Zealand Meccano Contact Persons

These are the persons to contact if you need information about the nearest Meccano Club, or Meccano generally.

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HAWKES BAY:	Trevor Adam, 22 Ferguson Street, Bay View, NAPIER	0-6-836 6827
MANAWATU/	Bruce Geange, 4 Winchester Street, PALMERSTON NORTH	0-6-357 0566
WANGANUI/	Tom Pittams, 28 Pauri Village, R.D. 2, WANGANUI	0-6-345 6788
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	Simon Moody, Blue Mountains Road, R.D. 1, UPPER HUTT	0-4-528 3032
CANTERBURY:	Graeme O'Neill, 49 Hindness Street, CHRISTCHURCH	0-3-322 7456
	John Ince, 37 Burnside Crescent, CHRISTCHURCH	0-3-358 7351
OTAGO:	Karen Murcott, 56 Aytoun Street, Shiel Hill, DUNEDIN	0-3-454 3457

Electric Clock

This Electric Clock first appeared in Meccano Magazine in 1954 and was repeated by 'Spanner' in a 1967 M.M. The instructions are particularly clear and detailed.

We hope printing it in this issue will be a challenge to modellers to "have a go" and see whether "it goes".

CLOCKS always provide a challenge to the serious Meccano model-builder, a fact proved by the excellent reception given to the automatically-winding weight-driven clock we featured in these pages last year. In fact, clocks of all types are no strangers to Meccano Magazine, but it is many years since readers were given an effective electric clock to build. Indeed, the last clock of this type appeared in a 1954 issue of the 'M.M.', so I felt it was about time we featured another example and you will find this described below. Actually, it is not strictly correct to describe the model as 'another' example, as it is really a modified version of the model featured in 1954, but I doubt if many of today's readers will have seen the original.

The problem with electric clocks, of course, is obtaining a motor that will run at a constant speed irrespective of voltage changes and, luckily, a synchronous motor will do just that. A motor of this type runs from Alternating Current at a speed governed by the fluctuations of the electricity supply frequency, the actual speed depending on the number of 'poles' possessed by the motor. Provided the power source has sufficient voltage to drive the motor, changes in voltage will not affect its speed, as the number of cycles per second inherent in the electrical supply does not alter.

Framework

First to be built should be the chassis or framework for the motor and gearing. This, in fact, can be completed quite independently of the case and can be fitted as a whole into the case when finished. To begin with, two $7\frac{1}{2}$ in. Strips 1 are bolted to a $5\frac{1}{2}$ in. by $3\frac{1}{2}$ in. Flat Plate 2, a distance of one hole separating them. The Bolts holding the lower of these Strips are also used to fix two $1\frac{1}{2}$ in. by $\frac{1}{2}$ in. Double Angle Strips to the other side of the Plate, one at each edge, and a $1\frac{1}{2}$ in. Flat Girder 3 is bolted to each of these Double Angle Strips. Situated in the centre of the gap between Strips 1, and also bolted to Flat Plate 2, are two $1\frac{1}{2}$ in. Strips 4 which will later provide an extended bearing for the motor mainshaft.

Attached to the ends of each Strip 1 are two $1\frac{1}{2}$ in. Double Angle Strips, the free lugs of which are joined by another $7\frac{1}{2}$ in. Strip 5, then Strips 5 are themselves joined by a 3 in. by $1\frac{1}{2}$ in. Flat Plate 6, protruding a distance of two holes beneath lower Strip 5. Fixed to the inside of this Flat Plate, in the gap between Strips

5, are another two $1\frac{1}{2}$ in. Strips which will later provide the other extended bearings for the motor mainshaft.

Bolted to the inside of Flat Plate 1, one at each corner, are four $1\frac{1}{2}$ in. by $\frac{1}{2}$ in. Double Angle Strips 7, the free lugs of which are connected as shown by two $5\frac{1}{2}$ in. Strips 8 and two $3\frac{1}{2}$ in. Strips 9. A further two $3\frac{1}{2}$ in. Strips 10 are fixed between Strips 8; the securing Bolts passing through the second holes from the tops of Strips 8, while another three $3\frac{1}{2}$ in. Strips 11 are fixed between the centre holes of Strips 8. Two $1\frac{1}{2}$ in. Angle Girders 12 joined by a $3\frac{1}{2}$ in. by $\frac{1}{2}$ in. Double Angle Strip 13, are bolted to the inside of Flat Plate 2.

Gearing

Journalled in Strips 10 and Flat Plate 2 is a 2 in. Rod held in place by a 50-teeth Gear 14 and a $\frac{1}{2}$ in. Pinion 15, mounted one each side of the Flat Plate. Pinion 15 engages with a 50-teeth Gear fixed, along with a $\frac{1}{2}$ in. Pinion 16 and a Collar, on another 2 in. Rod journalled in the centre holes of Strips 10 and Flat Plate 2, the Gear Wheel and Collar holding the Rod in place. Gear Wheel 14, on the other hand, engages with a $\frac{1}{2}$ in. Pinion 17 on a 2 in. Rod journalled in Flat Plate 2, Double Angle Strip 13 and a $1\frac{1}{2}$ in. Flat Girder 18, bolted to corresponding Strip 8. This Rod also carries a 1 in. Gear 19, between the Flat Plate and the Double Angle Strip, and a 1 in. Pulley with rubber Ring 20 and a 50-teeth Gear Wheel 21 between the Double Angle Strip and the Flat Girder. Note that Pulley 20 is clamped tight against Gear 21, the latter being loose on the Rod.

Mounted in the centre hole of Double Angle Strip 13 and Flat Plate 2 is a $4\frac{1}{2}$ in. Rod 22, which protrudes about two inches in front of the Double Angle Strip. On this Rod is fixed a 1 in. Gear, in mesh with Gear 19, while mounted loose on the Rod is a 57-teeth Gear 23, spaced from the Double Angle Strip by three Washers and in mesh with Pinion 16. The boss of Gear Wheel 23 is held in one end of a Socket Coupling 24, which is also loose on the Rod. At a later stage this "loose" assembly will be held in place by the minute hand of the clock as will be seen.

Still on the gearing, another 2 in. Rod 25 is journalled in the very centre hole of Flat Plate 2 and in the corresponding holes of Strips 11, a $3\frac{1}{2}$ in. Strip having first been bolted across the inside of Plate 2 to pro-

vide an extended bearing for the Rod, which is held in place by a $\frac{1}{2}$ in. Pinion 26 and a 57-teeth Gear 27. Also journalled in Strips 11 and Face Plate 2 is yet another 2 in. Rod held in place by a Collar and a $\frac{1}{2}$ in. Pinion 28 and carrying a 50-teeth Gear 29 in its centre. Gear 29 engages with a Worm 30 on a 4 in. Rod held by Collars in $1\frac{1}{2}$ in. Flat Girders 3. Towards the other end of this Rod is a further 50-teeth Gear, which engages with another Worm 31, fixed on a 4 in. Rod 32 also journalled in Strips 11 and Flat Plate 2, a Collar holding it in place. Fixed on the Rod outside the Flat Plate is a 57-teeth Gear Wheel 33 that meshes with Pinion 26.

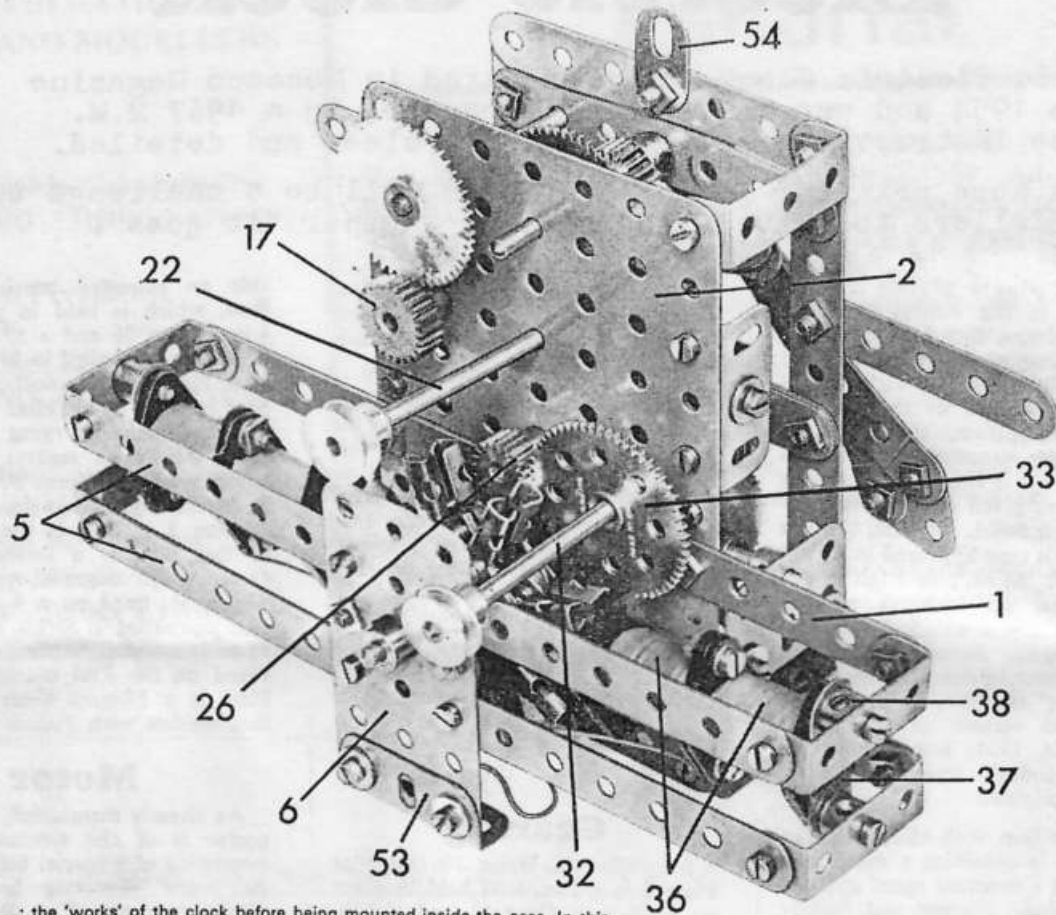
Motor

As already mentioned, the driving motor is of the synchronous type consisting of a special built-up wheel or 'rotor' revolving between two electro-magnets. Two Bush Wheels 34, each with eight Rod and Strip Connectors 35 bolted at equal angles to its face, are fixed on a $2\frac{1}{2}$ in. Rod, journalled in Flat Plates 2 and 6 with three Washers spacing the inside Bush Wheel from Strips 4. The Bush Wheels must be so arranged that corresponding Rod and Strip Connectors lie in identical positions with perhaps $1/12$ in. separating them. The Rod is held in place by a Collar outside Plate 6 and by a $\frac{1}{2}$ in. Pinion inside Plate 2, this Pinion meshing with Gear Wheel 27.

Two electro-magnets are now each built up from two Cylindrical Coils 36 (Elektrikit part No. 522), fixed together, with their contacts joining, by $\frac{1}{2}$ in. Bolts. The 'E' terminal of one Coil must be in contact with the 'S' terminal of the other. Two 1 in. Cylindrical Cores (Elektrikit part No. 528) are joined together by a 1 in. Screwed Rod and are attached to a $1\frac{1}{2}$ in. Strip 37 by a Bolt passed through the centre hole of the Strip and screwed into one of the Cylindrical Cores. The whole unit is then attached to the Double Angle Strips, bolted between Strips 1 and 5, by $\frac{1}{2}$ in. Bolts, with a Washer and a Collar 38 on the shank of each Bolt acting as spacers. Finally, $\frac{1}{2}$ in. Pulleys with boss are fixed on the ends of Rods 22 and 32.

Case

The completed mechanism can, of course, be fitted in any suitable case but we have chosen a typical mantel clock design. A compound $7\frac{1}{2}$ in. by $3\frac{1}{2}$ in. flat plate, obtained from two $5\frac{1}{2}$ in. by $3\frac{1}{2}$ in. Flat Plates overlapped seven holes, is edged along three sides by a $7\frac{1}{2}$ in. Angle Girder



the 'works' of the clock before being mounted inside the case. In this view lower $3\frac{1}{2}$ in. Strip 9 has been removed.

39 and two $3\frac{1}{2}$ in. Angle Girders 40. Fixed at each corner is a $4\frac{1}{2}$ in. Angle Girder 41, then the tops of each pair of these Angle Girders are joined by a $3\frac{1}{2}$ in. Angle Girder 42, the resulting space being enclosed by two $4\frac{1}{2}$ in. by $2\frac{1}{2}$ in. Flexible Plates 43.

Bolted to each end of Angle Girder 39, and running in order from Angle Girder 40, are a $2\frac{1}{2}$ in. Strip 44, a $1\frac{1}{2}$ in. Strip 45 and a 1 in. Corner Bracket 46. A $7\frac{1}{2}$ in. diameter Circular Strip 47 is then attached to Girders 40 by two Fish-plates 48 and 49 fixed between the Circular Strip and the upper holes of the Angle Girders.

At this stage the mechanism should be fixed in position, but first of all, a 2 in. Strip should be attached to the centre of lower Strip 9 by a $\frac{1}{2}$ in. Bolt 50, the shank of the Bolt pointing forwards. The mechanism is then positioned in the case with the shank of Bolt 50 protruding through the centre hole of Girder 39 and the corresponding hole of Circular Strip 47, and a Nut is added. In addition two $2\frac{1}{2}$ in. Strips 51 and 52 are bolted between Strips 8 and Circular Strip 47. Also, a $1\frac{1}{2}$ in. Angle Girder 53 is bolted to the bottom of Flat Plate 6 and the horizontal flange of this rests on the compound $7\frac{1}{2}$ in. by $3\frac{1}{2}$ in. Flat Plate, but note that it is not bolted to the compound flat plate. A circular disc, a fraction under $6\frac{1}{2}$ in. diameter is cut out of stiff cardboard, is marked up to make the face of the clock and is fixed in position by bolting it to the top of Strip 49. It is also bolted to a Fishplate 54 attached to the centre of upper Strip 9.

An hour hand is built up from two $2\frac{1}{2}$ in. Curved Strips joined at one end by a 1 in. Triangular Plate 55. The other ends are overlapped so that the second holes in the Strips are in line, then a Double Arm Crank 56 is bolted to them with its boss in line with the second holes. The completed hand is mounted loose on Rod 22, but with the boss of the Double Arm Crank fixed in the outer end of Socket Coupling 25.

The minute hand is built up from two 4 in. Stepped Curved Strips 57, joined at one end by a 1 in. Triangular Plate and at the other end by a 1 in. Corner Bracket. A Crank is bolted to the underside of the Curved Strips and is then tightly fixed on the very end of Rod 22. The boss of Double Arm Crank 56 should not be clamped so tightly against the hour hand that it causes friction when the hands revolve.

Lastly, a 10 in. by $3\frac{1}{2}$ in. compound Flexible Plate 58 is built up from four $5\frac{1}{2}$ in. by $2\frac{1}{2}$ in. Flexible Plates overlapped as shown by four $3\frac{1}{2}$ in. Strips 59, then the complete unit is curved to shape and is attached to Angle Girders 42 by Obtuse Angle Brackets. It is also attached to the top dead centre of Circular Strip 47 by an ordinary Angle Bracket.

Wiring

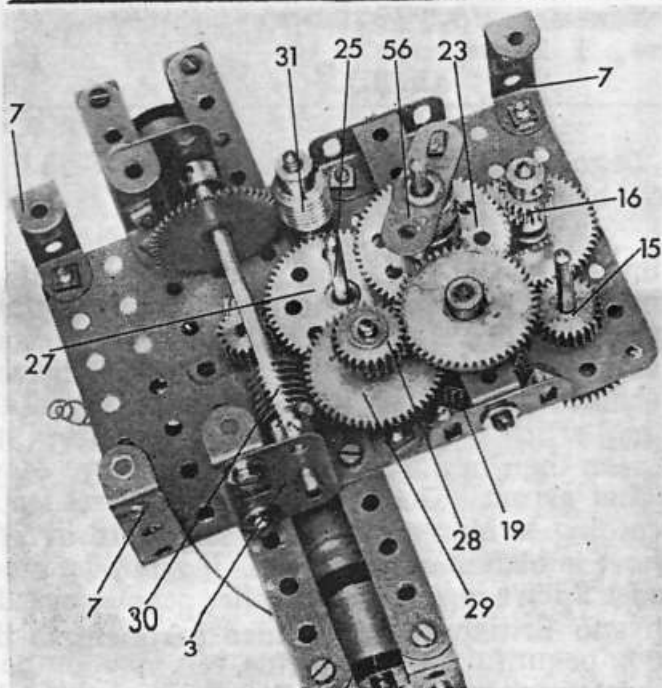
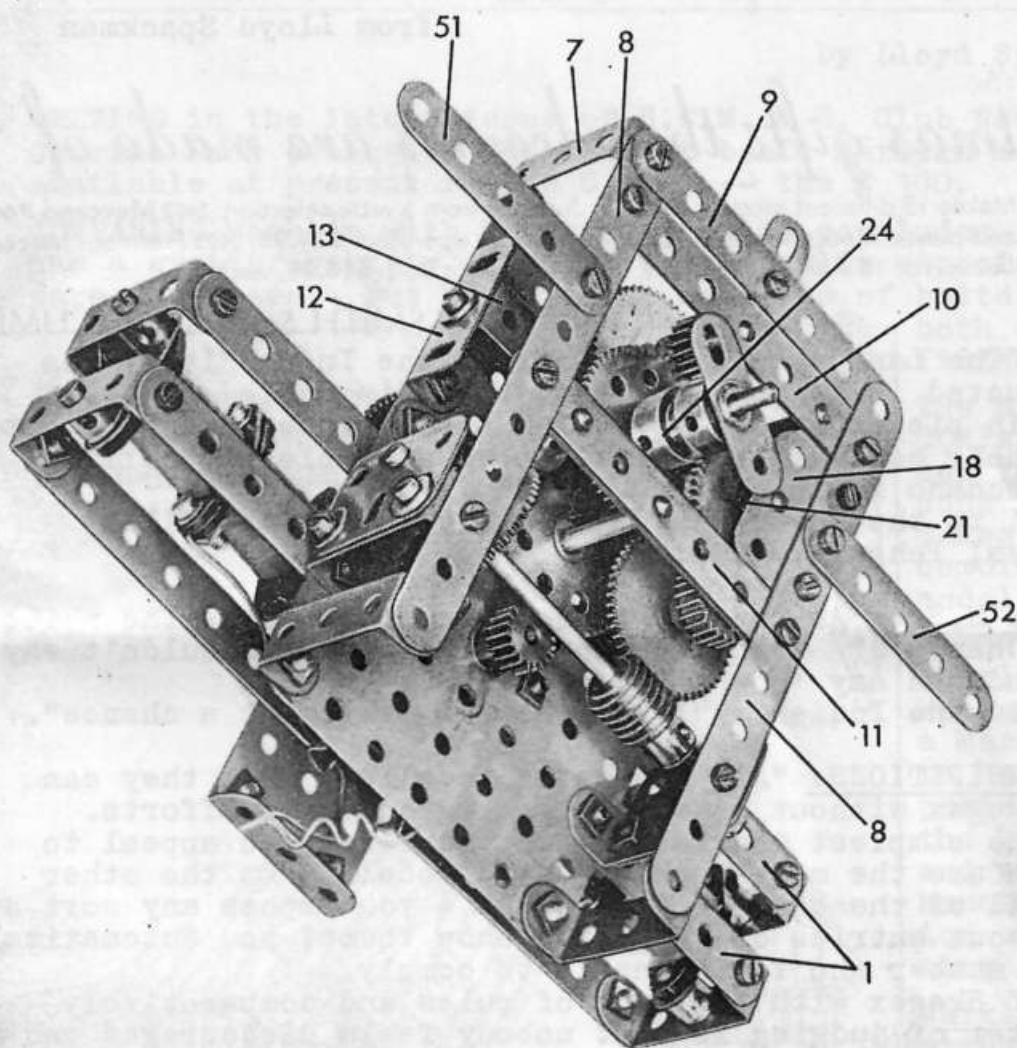
Wiring of the model is simple. The lower terminals of each electro-magnet are connected together by a length of wire whereas the upper terminals of the electro-magnets are connected individually, one to one terminal of the power source and the other to the other terminal

of the power source. The power source itself should give 15 volts AC. To start the clock, the Pulley on the end of Rod 32 should be turned until the wheel built up from Bush Wheels 34 is revolving at a speed 'synchronous' with the AC current, i.e. 750 r.p.m. Once this speed is attained the clock should continue working under its own power.

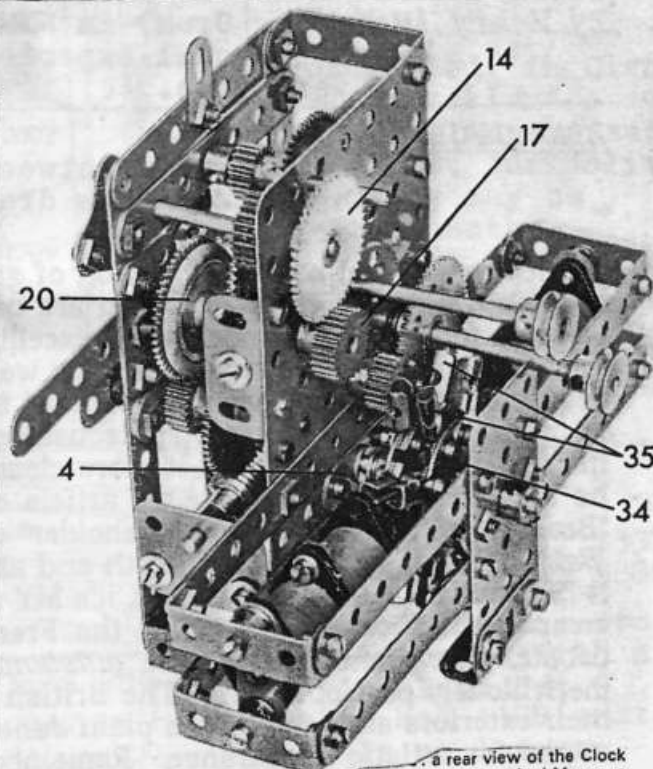
Before the model will operate at its best, you will probably find that a certain amount of adjustment is required. The things to be checked and adjusted if necessary are the positions of Rod and Strip Connectors 35 in relation to each other and the distance of the Rod and Strip Connectors from the Cores of the electro-magnets. Of course, all moving parts, particularly the built-up wheel, must be as free from friction as possible.

Parts required

4 of No. 1b	2 of No. 23a	2 of No. 77
2 of No. 2	2 of No. 24	2 of No. 82
11 of No. 3	3 of No. 25	2 of No. 89b
4 of No. 5	3 of No. 26	2 of No. 90
1 of No. 6	5 of No. 27	3 of No. 103h
8 of No. 6a	3 of No. 27a	8 of No. 111a
1 of No. 8b	2 of No. 31	8 of No. 111c
4 of No. 9a	2 of No. 32	3 of No. 133
4 of No. 9b	130 of No. 37a	4 of No. 142c
3 of No. 9f	120 of No. 37b	1 of No. 145
3 of No. 10	40 of No. 38	1 of No. 155
5 of No. 12	10 of No. 48	1 of No. 171
1 of No. 15a	1 of No. 48b	4 of No. 191
2 of No. 15b	3 of No. 52a	4 of No. 192
1 of No. 16a	9 of No. 59	16 of No. 212
3 of No. 17	1 of No. 62	4 of No. 522
1 of No. 18a	1 of No. 62b	4 of No. 528
5 of No. 22	1 of No. 73	



Top: another view of the motor. Note the friction drive to the hands, which enables the hands to be set without affecting the motor. Above: in this view of the drive mechanism the front framework has been removed to show the layout of the gears



a rear view of the Clock mechanism showing the synchronous motor, built up from standard Meccano and Elekkit parts

BITS AND PIECES

from Lloyd Spackman

Christmas gifts that dreams are made of

2401 Meccano, No 1. Metal Makes 15 different models. \$59.95. Just one from a wide selection. 2402 Meccano Power Tool, New release, for metal and plastic Meccano pieces, battery or power operated. \$39.95, 2403 From our Meccano collection of 18 individual models; Plane, Bike, Hot Rod. \$14.95, each.

SMITH & CAUGHEY LIMITED

QUOTATION: "The Lansdowne bridge (across the Indus River) was first constructed in London, England, then dismantled and shipped out in pieces..... The men who designed and built it disparaged their colleagues who had to re-assemble it, calling them 'mere Meccano Engineers'....."

From 'Karachi to the Khyber' by Mark Tully in 'Great Railway Journeys', Penguin, 1995.

Joke from the U.S.: An Indian walked around, greeting the white girls with "Chance !" Finally one girl said "You shouldn't say 'Chance' - Indians say 'How'." "Not me", said the Indian. "I know how; I just want a chance".

COMMENT ON EXHIBITIONS: "All levels of modellers feel they can exhibit at Skegex without someone disparaging their efforts. After all, the simplest models are just as likely to appeal to the public as are the most sophisticated models. On the other hand if - full of the best of intentions - you impose any sort of conditions about entries or suggest a show theme, you automatically put off some member who feels unable to comply. The virtue of Skegex with its lack of rules and comparatively informal system of judging is that nobody feels discouraged and most people feel inspired to even better modelling. I, for one, consider that's how it should be."

By Henry (Motoring Crum) in NMMG Newsmag No. 73..

(From personal experience, I know this is very true. L.S.)

BEAUTIFUL MECCANO !!

The comparison between Lego and Meccano in our October B. & P. has drawn this comment from Keith Cameron:

"A Meccano model has a suggestion of grittiness and toil. Lego fits together almost without effort. It suggests elegance". You are bound to get *many* dissenting opinions on *that* I cannot think of any model more excelling in elegance than a well constructed Meccano model. Many models show beauty as well as mechanical excellence. The balance between beauty and utilitarian accuracy is hard to achieve in a model. It is a worthwhile goal that is infrequently stressed in our discussions and articles. Pat Briggs certainly achieves it in his models, and nowhere is it more clearly seen than in Jupiter, his recent orrery. Maybe he or someone should write an article on that aspect. The matter raises several issues. "Beauty is in the eyes of the beholder" according to Margaret Wolfe Hungerford in *Molly Bawn*. This is at best a half-truth and at worst is blatant subjectivism. If I build a model, it IS beautiful, because I built it, it's MY model, I don't care whatever other people say!! The comparison between models at the French and British shows is also pertinent to this debate. The French models are *outstandingly* beautiful on the outside, but may not be so meticulously perfect within. The British models may be mechanical perfection within but their exteriors all too often are plain Jane. Who is to decide? Perhaps we should give extra marks for artistic appearance. Remember Servetti's model of an Indian goddess? People said, "But she didn't *do* anything." What did they expect her to do? Likewise the glorious model of Barcelona Cathedral. Jean-Louis Figureau refers to this subject in his book.

The facile snap-together Lego principle appeals to those captured by the current desire for *instant gratification*. Give me nuts and bolts, lots of them.

MÄRKLIN OR MECCANO, OR BOTH ?

by Lloyd Spackman

WRITING in the latest issue of S.C.M. & E. Club Newsletter, Charlie Pack evaluates the largest basic Märklin Metall Set available at present in the U.S.A. -- the M 100.

COMPARING Märklin with Meccano, Charlie concludes that Meccano has a greater variety of parts than Märklin especially in brassware and gears. But Märklin, he says, is of better Quality in

both design and finish.

The high degree of COMPATIBILITY between these two metal construction systems makes it easy to combine them for model building (unless one is a purist).

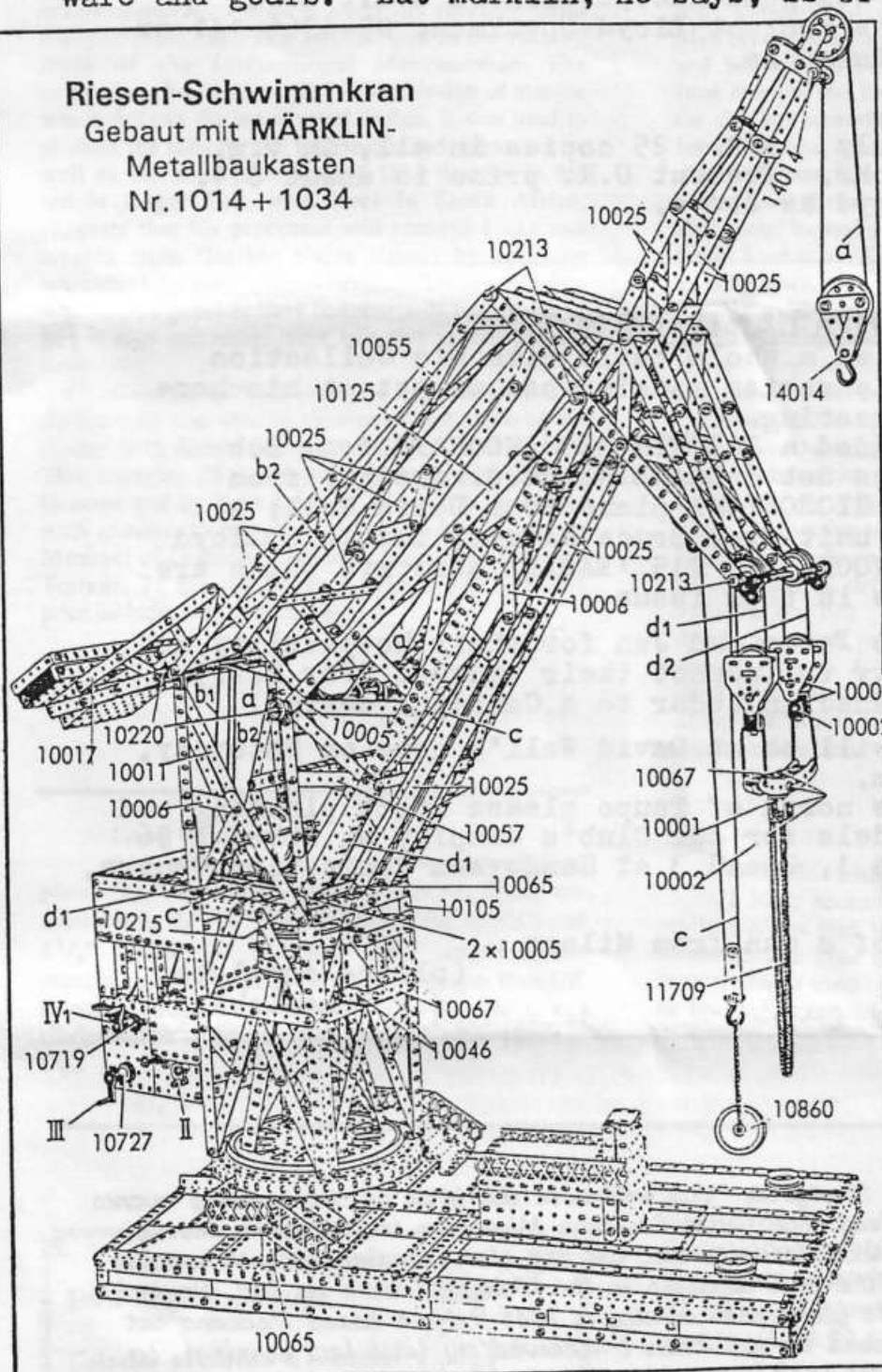
Charlie suggests Meccanomen should buy a Märklin set so as to have access to parts that are not in the Meccano system and which could enhance construction and detail of many models.

Märklin Metall Construction sets are not available in N.Z. shops. The N.Z. agents are Polymer Systems Ltd. in Glenfield, Auckland. They will import sets on request but delivery times may be several months.

Retail prices, Incl.
G.S.T., range from
\$92 for a M 10 Set to
\$580 (approx.) for
the M 100.

The best comparison
is an M 60 with a
Calais Set 6:
M60, 664 parts, \$337
C.6, 640 " \$286

M100 has 1469 parts and compares with a 1991 Calais Set 9 which had 1180 parts but is no longer available.



CLASSIC MÄRKLIN model of a bygone era: the level-luffing, self-propelled floating crane. The giant prototype, known as "Herman the German", is still in service at the Long Beach Naval Shipyard.

THANKS TO S.C.M. & E. Newsletter,
Winter, 1996, for the above drawing
of a famous Märklin model. Some
Meccanomen have built it (in Meccano).

FOR SALE1983 Calais M2 Set:

Incl. 3 metal and 3 foam plastic storage trays; 3 P/N 236 perforated lids which can be used for model bases, etc.; 2 motors with reversing switches, etc.; manual and decals. Whole set is in new condition and zinc parts have been replated. Original box good except corners a bit worn. Price \$100. Please contact Lloyd Spackman, 09-4866-141 or 1/344 Lake Road, Takapuna.

N.M.M.G 'NEWSMAG':

August, 1982, to July, 1989. 25 copies in all, in v.g. condition. \$3 each/. Present U.K. price is about \$11. Please contact Lloyd as above.

AUCKLAND NEWS

PETER HANCOCK filled a whole table with his Collection. Starter and Dynamic series models when we met at his home for our February meeting.

Other models included a BALDWIN MECCANOGRAPH from Bob McCracken; a Calais Set 6 DRAGLINE (K.C. design) from George Ovenden; a MICROLIGHT plane from David Wall; a TRACTOR & TRAILER unit from Bruce Haines; and from Lloyd Spackman the 'CHINOOK' and F15 'EAGLE' aircraft which are pictured elsewhere in this issue.

We are grateful to Peter and Jan for their hospitality and for the opportunity to inspect their unusual (for N.Z.) home built from Canadian cedar to a Canadian design.

Our next meeting will be at David Wall's home on Saturday, May 11th, from 2pm.

Will all modellers north of Taupo please start planning and building their models for our Club's display at MODEL X'96 to be held on June 1, 2 and 3 at Henderson Recreation Centre, as previously.

"The wife of a man from Milano...

(please complete
our limerick)

From Lindsay Bond, Stratford. "You will note the first of the exciting events for the 1966 Meccano Year. The Great Southern Migration to the Simon Moody Home of replica brass Meccano parts etc. We are also planning another special Meccano outing to visit the club members in the Wanganui area on 2nd. November.

I have spent the last few weeks sorting a 1948-9 No.8 boxed Meccano set identical to the one I saved up for when I received my first few earnings, so the restoration has brought back very pleasant memories of years long gone by.

The New Plymouth Museum has an antique Toy Display from the period of 1900 to the present day with one small Meccano model. No Hornby trains. Plenty of Lego advertising, but no promotional Meccano material. I've sent them some and hope they will use it"

**Christchurch Meccano Club Meeting
February 1996
Reported by John Ince**

This was a quiet meeting with only fourteen present. **John Ince** was the only one to bring models. First there was the model of the Endeavour which picked up a prize in the recent ISM competition. John also brought his recently build Flexible Plate Processor as described in the January issue of the International Meccanoman. For comparison he also brought his own design of mangle which follows the more usual design. It was used to produce the sails for the Endeavour and works just as well as the more complicated ISM design. In his article Roger Hill, who lives in South Africa, suggests that his processor will remove kinks and creases from flexible plates simply by applying pressure at the same time as bending. Those modellers who have a panel beaters hammer will find that it is just as easy and rather more effective to the job on a steel anvil.

Graeme O'Neill provided a TV and VCR so the meeting was able to view an edited video of the Easter 1995 Exhibition prepared by **Ian Torrens**. This contains 25 minutes of footage provided by Graeme and by **Bert Lory** of Omarama. Together with another 25 minutes or so filmed by **Warren Murcott** of Dunedin this video is available from Ian Torrens, 71 Oxford Street, Lyttelton for \$20. The price includes tape and postage.

Long Screws

I have located a source of cheese head, zinc plated $\frac{5}{32}$ " Whitworth machine screws. These are available in $\frac{3}{8}$ ", $\frac{1}{2}$ " and $\frac{3}{4}$ " lengths for \$10/100 and $1\frac{1}{4}$ " length for \$12/100. $1\frac{1}{8}$ " length is not manufactured. The prices are much cheaper than UK imports. Orders to John Ince, 37 Burnside Cres., Christchurch or phone (03) 3587351 after 10pm is OK.

**Christchurch Meccano Club Meeting
March 1996
Reported by John Ince**

The March meeting was attended by 17 members including a couple of juniors but none of our new members were present. Models included **John Hamlyn's** traction engine which is based on the classic Meccano model; **Cameron McFarlane's** swinging weight pendulum; **Anjuli** and **Stefan Burrell's** collection models. **John Ince** brought the Endeavour again mainly because the ship has recently been in port. While it was there John took the model down to Lyttelton for a few shots by Canterbury Television who were at the port to interview the crew and get some footage on board. The model looked good sitting on some pallets bases for an hour or so. There was a short clip on the CTV evening news.

David Lang demonstrated his *Moon Buggy* which was displayed at the 1995 Easter Exhibition. It is now complete and working. This fascinating model has a main wheel built from 4 x 167a; it is driven on the inside by four large tooth pinions except that one is a proxy. David has found that the plastic universal gear meshes quite nicely with 167a despite the pitch being slightly different. The driver sits inside the wheel. A steerable rear wheel and two long arm spring loaded side wheels complete the rolling parts. The main wheel is driven by an ingenious infinitely variable gearbox which consists of two tapering drums mounted parallel to each other but in the opposite sense. A stout rubber band transmits the drive from one to the other and is moved either way along the drums by a guide mounted on a motor driven screwed rod.

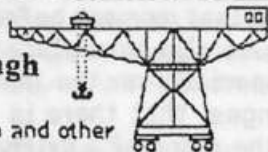
1935-36 Blue & Gold.

I have recently prepared some quite good replicas of the mid 30's blue plates with gold cross hatching. The blue is a close match to one of the several shades used by Binns Road and is applied by air brush. Any enquiries as above.

Don Blakeborough

Collector of Meccano and other
metal model building systems.

91 Cornfoot St, Castlecliff, Wanganui,
NEW ZEALAND. Phone (06) 344-5924



FOR SALE.

Encyclopedias of Meccano Parts. Amendment No. 4. This years amendment is now completed and costs \$2.00 plus postage. Air post to Australia \$1.80; Canada/USA \$2.50; Europe \$3.00. NZ \$0.80.

Still available Volumes 1 - 6 @ \$32.00 each.
Amendments 1 & 2 @ \$1.00 each. Amendment No. 3 @ \$5.00. Postage is extra on all items.

FUNDAMENTALS OF OUR HOBBY

Introduction by Lloyd Spackman

FROM 1983 to 1986 Alan Partridge wrote a series of excellent articles for N.M.M.G. 'Newsmag' on "The Techniques of Meccano".

Alan's articles are reminiscent of Bert Love's 1970 series in 'Meccano Magazine'. These were later re-printed in book form as "Meccano Constructor's Guide".

NUTS AND BOLTS are the fundamental items for constructing any of our models. It is difficult to envisage a model without at least one bolt and/or nut.

Alan's techniques for the use of nuts and bolts are well worth repeating so we are printing them here, with thanks to N.M.M.G. and 'Newsmag' No. 33.

2. Nuts and Bolts

Now, at last, I can get round to describing putting together two or more flat parts with nuts and bolts. The essence of good practice here is that the bolt must always go freely through the holes in the parts to be joined ; if any force, wriggling, or screwing is needed either the thread or the parts is likely to be damaged. If one of the parts is loose there's no problem ; if it's to be secured at two or more points, put all the nuts and bolts in place before tightening up any of them. If the parts have other empty holes, as when strips or plates are overlapped, put a drift (or, better, two) through these so that all the empty holes are perfectly aligned for later bolts or for use as rod journals. Then tighten each nut and bolt a little at a time. When there are several nuts and bolts joining the same parts, tighten a pair on a diagonal or a diameter first, rather than an adjacent pair. When each bolt is as tight as the screwdriver can get it, tighten a few degrees more with the spanner. When a small part such as a fishplate is to be secured by only one nut and bolt it should be lined up by a drift or temporarily braced or held (perhaps by a Mini-Mole or similar gripper) before the nut and bolt are tightened, but this situation should be avoided so far as is possible by the use of alternative small multi-hole parts. Where single bolting is temporary, awaiting further construction, it should be left so sloppy as to be obvious, rather than half tightened up only to be discovered later on the floor of the car !

If the parts to be joined do not line up easily, the drift is used - but not 'for levering parts into position' as the factory suggested. Bolts must be loosened until alignment is easily obtained and the drift used only to prove it - even the circular holes in Meccano parts allow a little play before the bolt is tightened. The good designer will foresee such situations and use a part with a slotted hole somewhere so as to make alignment easy.

So far I have assumed that there is easy access to the work point. Some years ago (in Meccano Engineer 9, September 1975) I described lots of ways to fix a threaded part in a cavity which will later become totally inaccessible, but I must confess that most of them have very rarely needed to be used. Much more common is the situation where access is merely difficult, such as where the desired place for a nut can only just be reached (or just not reached) by a finger tip. This is where the drift proves most useful, being put through from the bolt side and having a nut dropped over its point, using pliers or forceps if necessary. A finger tip or a strip with a dab of Blu-Tack then follows the point back as the drift is withdrawn, the point of the drift being run round the inside of the nut at the last moment before withdrawal so as to centre the nut on the hole. The bolt should then just slip into place - give it one turn, relax, and use the spanner. It sometimes happens, especially on the inner side of an angle girder with bolts in corresponding holes of the two flanges, that there is room for the nut in its final position, but not enough room to put it over the point of a drift. In such a situation it must be slid in sideways whilst tightly held in forceps, the drift still being used subsequently to centre it. The final possibility is always to put in the bolt from the side with the worst access and hold it with a long or oblique screwdriver whilst the nut is applied and tightened from the more accessible side.

WELLINGTON MECCANO CLUB
MEETING NOTES FOR FEBRUARY AND MARCH 1996
 -reported by Bryan Jones and Mike Highley

A rather wet evening marked the first meeting for 1996 at St Lukes. 11 members were present, with an apology from Lou Nichols. Over the Christmas period some members had been busy with their model building, as evidenced by the models present:

Colin Croft built a synchromesh gearbox; quite a clever arrangement which used rubber rings as friction clutches to bring the constant mesh gears to the right speed before a positive lock was achieved through built up dog clutches.

Wes Dalefield had a selection of second-hand parts, bought at very much reduced prices from MW Models. He visited England during the holidays, making two visits to the shop to see all the parts and models on display. **Don Flowers** brought a large model of a chassis for a Ford 4 Wheel Drive vehicle. This featured stub axles made from Exacto large diameter hollow axles, the drive power being taken through these via conventional sized axles to the outside face of the wheel hubs. The construction appears to be very sturdy and well capable of carrying the weight which results from a model of this size.

Mike Highley brought three models: a Patrol Car from the No 8 Manual, a Motor Coach from the No 6 Manual and a Steam Road Roller from the No 3 Manual. **Bryan Jones** had a de-constructed model of the No 10 Leaflet Lifting Shovel, a recently acquired model which had suffered some storage damage. He has dismantled it into sections for restoration, and brought along the chassis and cab assembly, minus the jib, bucket, front axle and differential. **Simon Moody** brought the gantry legs for a container transfer crane. These are a rectangular arrangement of box sections which will ultimately be spaced apart to form the gantry of the crane. Each end runs on two individually powered bogies, with all wheels driven through a gear train.

12 members attended the March meeting, with an apology from Colin Croft. We were visited by **Don Blakeborough**, who brought a No 6 Lynx Set, a rival construction set which appeared after World War Two. He also had a selection of photos of Meccano electric motors and other construction sets, and a Plastic Meccano tractor and side tipping wagon. **Don Flowers** brought the gearbox for his 4WD vehicle, compactly constructed with a gate-change lever for three speeds and reverse, a second lever for high/low ratio, and a third lever for 2-wheel/4-wheel drive.

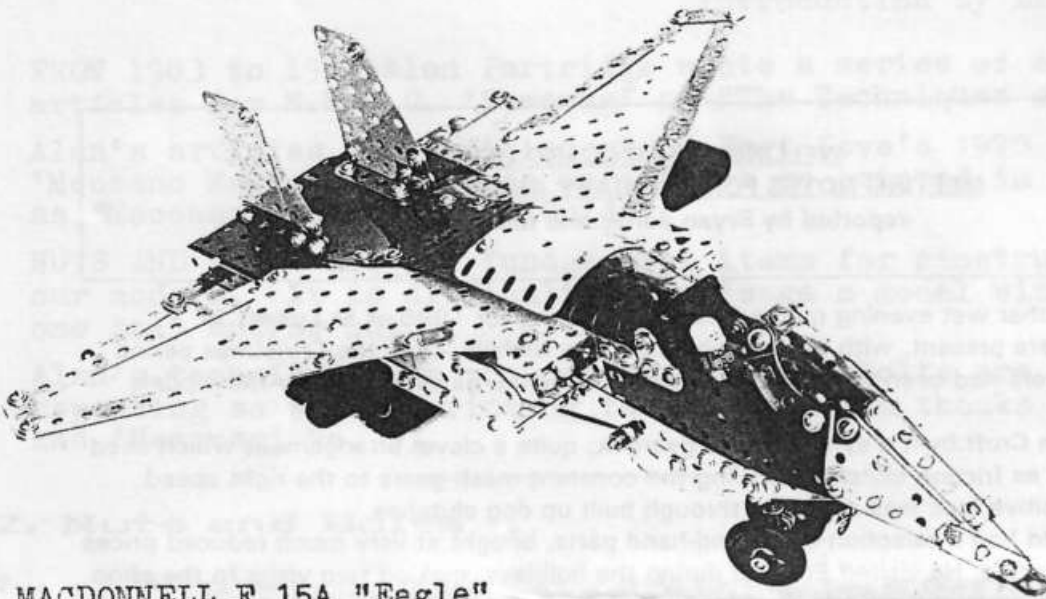
Mike Highley brought two large articulated trucks built from the No 7 Manual: a low loader and a flat tray lorry. **Bryan Jones** showed the Lifting Shovel again, with mechanical areas having been rebuilt to replace bent and out of line parts. **Simon Moody** showed the gantry platform for his crane. **Lou Nichols** had a very nice model of the racing car "Thunderbolt", made in 1930's era blue and gold parts.

Don Blakeborough presented a summary of the MWT Club's planning towards next year's Convention, the latest task being the location of a suitable venue. Simon reminded everyone of the main activities for the year; the AGM (next meeting), the Models and Hobbies Expo (to be held later than last year, in June or July), and our turn to host the MWT Club for a combined meeting. Notice was also given of the annual Tranzrail Open Day at the Hutt Workshops on March 10th for anyone interested in visiting.

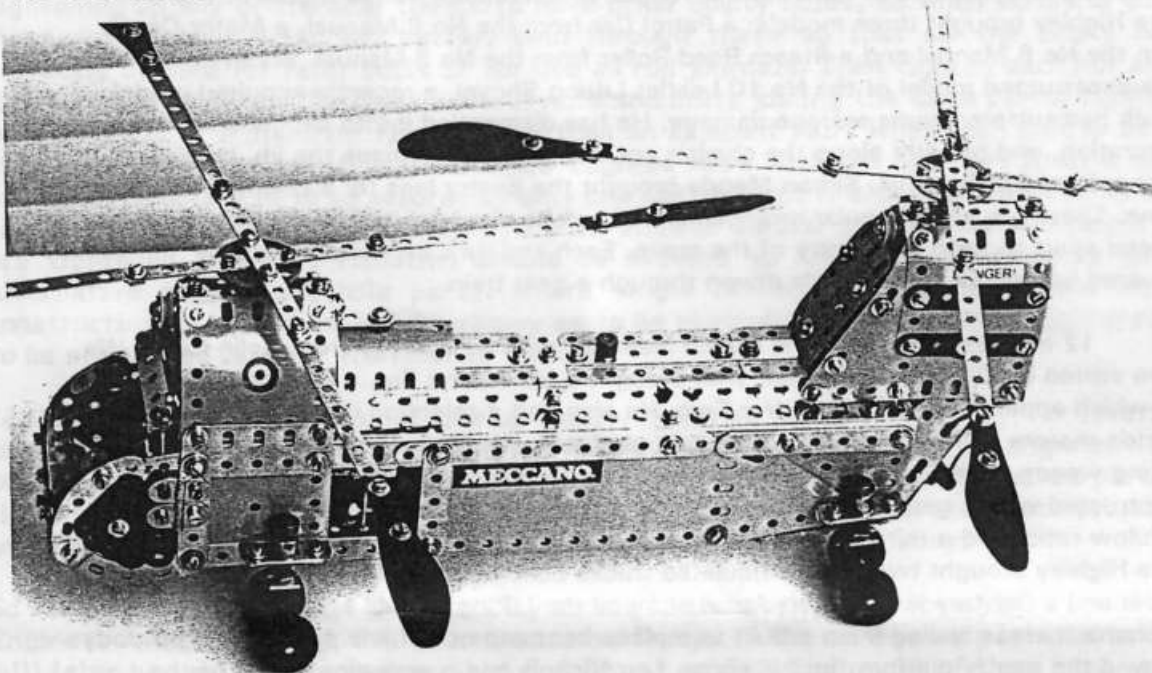
As April 5th is Good Friday, the next meeting has been brought forward to Friday 25th March and will be the AGM, as noted above.

TWO AIRCRAFT

By
Lloyd Spackman

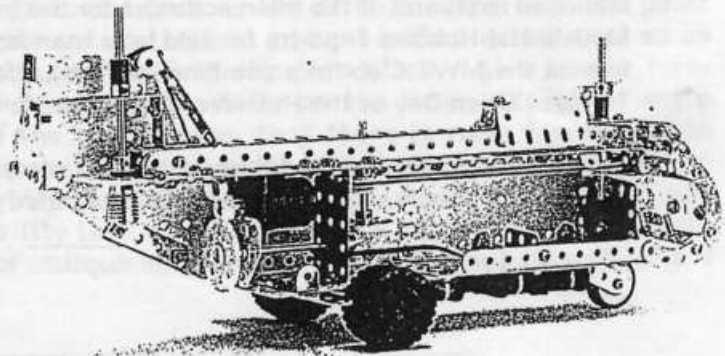


MACDONNELL F 15A "Eagle"
from Calais Set 6 Manual, with
modifications and help from photographs in
Martin Bowman's "World's Fastest Aircraft".
An MO motor drives the rear wheels for taxiing.



BOEING CH 47 "Chinook"
built from sketches at the back of the Calais Set 6 Manual.
Modified a good deal to conform to photographs in "Combat Helicopters since 1942" by Munson & Lumsden.

This drawing shows the internal arrangement.
P/N 192 panel on the side is bolted to threaded bosses. 4 x AA batteries are carried in the cargo hold. They drive an MO motor which drives the 2 rotors thru driving bands. 8 wheels are from 'Collection' Series models.



NZFMM LIBRARY INVENTORY

As at the 1st February 1996 the NZFMM Library held the following Meccano related publications:-

CONSTRUCTOR QUARTERLY

Nos. 20 to 30 inclusive

Running from 6/93 through to 12/95

Total = 11 magazines

THE MECCANO/MECCANOMAN'S NEWSMAG

Nos. 66 to 73 inclusive

Running from 7/93 through to 11/95

Total = 8 magazines

THE INTERNATIONAL MECCANOMAN

Nos. 9 to 16 inclusive (No. 13 missing)

Running from 5/93 through to 9/95

Total = 7 magazines

MMG (Midlands Meccano Guild) NEWSLETTER AND GAZETTE

Unnumbered, not inclusive

Running from 1/94 through to 4/95

Total = 4 magazines plus 6 Stoneleigh reports

SOUTHERN CALIFORNIA MECCANO AND ERECTOR CLUB NEWSLETTER

Not inclusive, running from 7/87 through to circa 1995

Total = 32 magazines

THE CANADIAN MECCANOMAN'S NEWSLETTER

Nos. 23 to 49, not inclusive

Running from 6/87 through to 12/93

Total = 13 magazines

CANADIAN MECCANO NEWS

Nos. 1 to 4 inclusive

Running from 3/94 through to 12/94

Total = 4 magazines

CANADIAN SPECIAL MODELS (instructions)

No. 6, Krazy Klock

No. 7, Diver's Helmet

No. 10, Double Ferris Wheel

No. 11, Twin Beam Pumping Engine

No. 13, Grasshopper Oil Pump

No. 15, Chemical Fire Engine

No. 15, Old Tyme Ferris Wheel

MECCANO MODELLERS ASSOCIATION

Total = 1 magazine, circa 1986

THE TRANSVAAL MECCANO GUILD

Nos. 7 to 9 inclusive

Running from 1/95 through to 5/95

Total = 3 magazines

SOUTH EAST LONDON MECCANO CLUB

Total = 5 magazines, circa 1987

In addition to the foregoing the library also holds the following publications which have been excluded from the main inventory because they are either written in a foreign language or are apparently no longer published:-

MAGAZINE du CLUB des MECCANO AMIS du

Total = 6 magazines, circa 1986 to 1991

MECCANO NIEUWS

Total = 7 magazines, circa 1986 to 1991

GRUPPO AMATORI MODELLISMO MECCANICO

Total = 2 magazines, circa 1989 to 1990

BUTLLETI de la PENYA del CARGOLET

Total = 2 magazines, circa 1991

BITS AND PIECES

from Lloyd Spackman

STEELTEC, but NO MECCANO:

K Mart is not stocking Meccano on its shelves but at least one of its stores has plenty of Steeltec alongside the Lego. Priced at from \$13.85 to \$78, there is a variety of sets including the Steeltec Power Driver.

NO MECCANO AGENT:

The last we heard, there is no agent for Meccano in South Africa. The previous agent had given up Meccano distribution and now represents competitor Steeltec. The Meccano agency was offered to Peter Matthews, but the deposit and minimum order which Calais wanted was quite beyond his means.

BUZ: According to Robert Renfrew writing in NMMG 'Newsmag' No. 38, Buz was manufactured in Australia from the late 1940's till mid-1970's. The business was sold to Toltoys which was a subsidiary of U.S.A.'s General Mills (who once owned MECCANO). Toltoys did not want it and shipped the dies to New Zealand where it was made for a few years and some was exported back to Australia. Most N.Z. modellers have at least a few Buz parts among their Meccano.

HIDDEN ! : I thought I was doing both Basil and Auckland Meccano Club a favour when I loaned my Chinook helicopter model to North Shore Hobbies for his window display. For a couple of days the model sat proudly in the window. Then Basil plastered a large sign across the whole window advertising big discounts on Slot Car Sets. My model was well and truly hidden till I took it away. After he cleaned his shop window I loaned him the F15 fighter plane.

SOUTH AFRICA NEWS:

Modellers in S.A. who have used Remco's 'Steeltec' have found the instructions are far more difficult to follow than the Calais ones for Meccano models.

S.A. modellers say the red and nickel finishes on the Calais 'Collection' series are attractive but the powder coating is of variable quality.

MECCANO vs. REMCO:

Meccano France seems determined to eliminate opposition product, STEELTEC, wherever it is sold. Court cases in the Netherlands and Canada have been successful, subject to pending appeals. Calais' Legal Department hasn't found New Zealand yet. Here Steeltec has been displayed in some toy stores cheek by jowl with Meccano and Lego.

UNABLE TO SCREEN Superleague football, TV3 reverted to its 'World's Greatest Commercials' programme which included a LEGO advertisement. A bit of a comedown from Superleague !

LETTER: Frank Davis in Rotorua writes that he received a shoebox of circa 1950 Meccano from a relative in Christchurch. In it were some pulleys he needed, plus tyres. Frank says it gives him a thrill to open such a 'mystery' parcel, untouched for probably 40 years.

END ONE: "Whenever you find someone who is convinced he is a real wit, give him the benefit of the doubt. He is probably half right."
(Jean Paré)

THE SUCCESSOR TO FRANK HORNBY'S MECCANO GUILD

Frank Hornby's great ideal was to establish a worldwide fraternity of Meccano clubs and individual enthusiasts, all linked together in the Meccano Guild.

The continuing strength of the clubs today, and the establishment by enthusiasts of several independent magazines, show the undying potential and capacity of Meccano. The standard of modelbuilding is higher than ever.

The Meccano Guild and Meccano Magazine were, alas, defunct by 1981. Now, in their place, Meccano enthusiasts in nineteen countries have combined (as a result of Michael Adler's initiative) to establish the International Society of Meccanomen, with its own periodical journal, 'International Meccanoman'.

We all stand to gain, and, while remaining independent of the Meccano company, we can influence future developments. But the club of which you are a member is not in the least threatened or diminished by the establishment of the I.S.M: rather, it will be strengthened, as in the golden days of Meccano Liverpool.

So you are invited to join the I.S.M: for each annual subscription you will receive (in January, May and September) a copy of 'International Meccanoman', with illustrated feature articles, new Meccano ideas, and news of Meccano clubs worldwide. Don Redmond of Canada describes it as 'packed with detail, much of it not available anywhere else'. Membership brings other privileges too.

Hitherto, exorbitant bank charges have made it expensive to send money overseas. But, very fortunately, Geoff Wright has agreed to make available his facilities for payment by American Express and other credit cards: he passes on all the money so received without deduction to the Society. If you don't have a credit card, combine with someone else who has. (Of course, if you are in the UK you can pay by cheque.)

To enrol in the I.S.M, just apply saying that you want to join the I.S.M. for 1996, giving 1: Your full name, 2: Address, with postcode/zipcode, and country, 3: Date of birth, 4: Telephone number, 5: (Optional) Say if willing to correspond with other members, and in which language(s), 6: (Optional) Your occupation, 7: Your general interests, 8: Your particular Meccano interests e.g. collecting, helping beginners, robots, Meccano history, clocks, astronomy, cranes, vehicles, fairground models, etc. etc.

Then, send this (or Fax) to M.W.Models, 4 Greys Road, Henley, RG9 1RY, England, also authorising them to charge a £10 sterling 1996 I.S.M. subscription through your credit card: Access, Visa, Switch, Eurocard, Mastercard, American Express, Optima, or Diners Club. Give your card number, issue date (or Switch issue number), expiry date, and signature. International Fax number: +44 1491 57 11 75.

If you live in Europe, you can pay by Eurocheque. If in UK, by cheque.

You will then receive an enrolment card, the current Membership List, and three I.M. magazines in January, May and September 1996.

The I.S.M's enamel badge in red/blue/gold is, not surprisingly, triangular in shape! You will be told how you can obtain it.

The magazine is in English, the language of many members, but a summary in French is also provided. Editions in other languages are under consideration. Back numbers as far as 1988 are stocked by M.W.Models.

NOTE: Lindsay Bond is a N.Z. agent for this Mag.

JOIN THE GREAT MECCANO MIGRATION.

SATURDAY, JULY 6th.

This is your opportunity to join the BUS TRIP at various points along the route on a special trip to the Home, Workshop and Forrestry Farm of Simon Moody his wife and family.

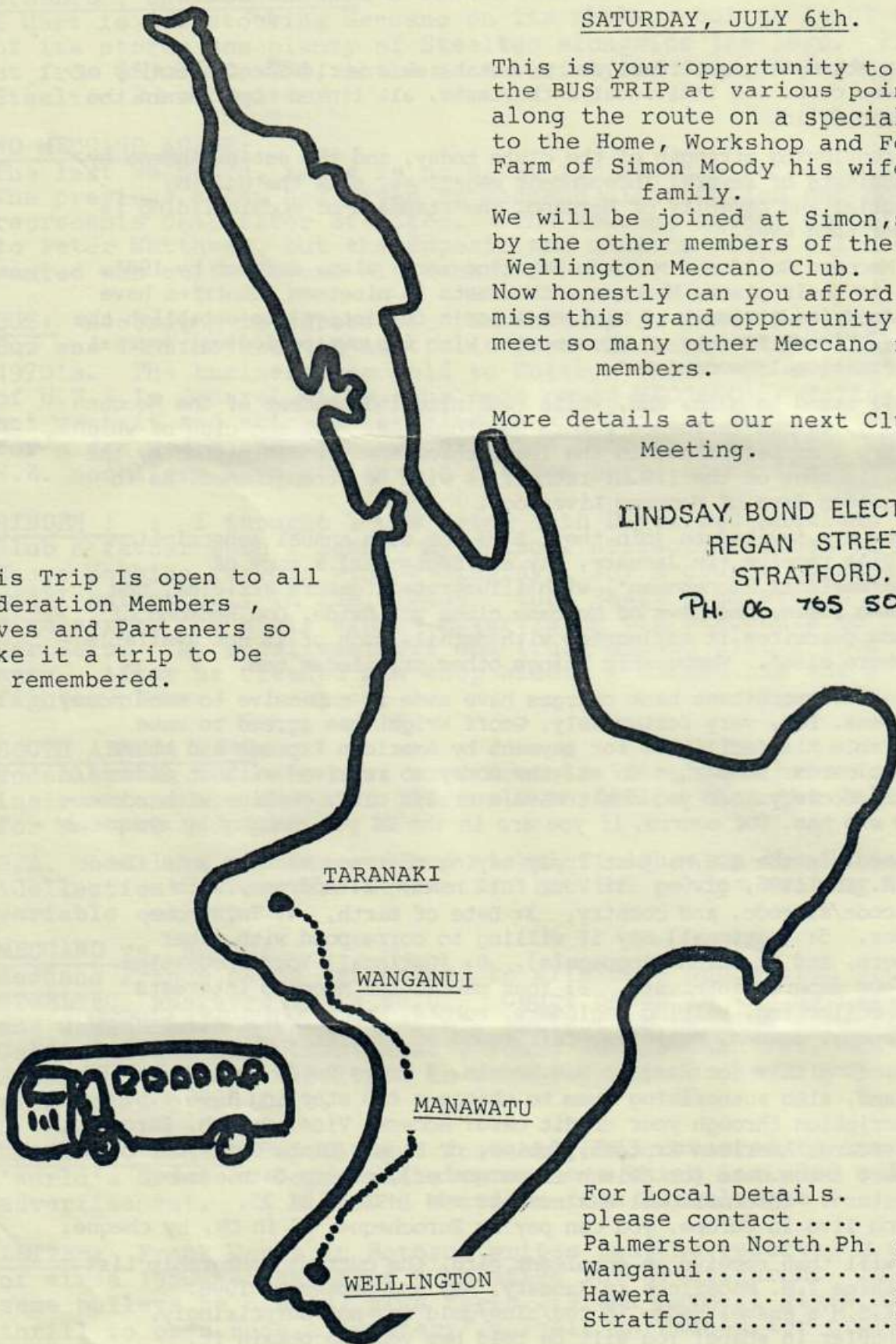
We will be joined at Simon,s Home by the other members of the host Wellington Meccano Club.

Now honestly can you afford to miss this grand opportunity to meet so many other Meccano family members.

More details at our next Club Meeting.

LINDSAY BOND ELECTRONICS
REGAN STREET,
STRATFORD.
Ph. 06 765 5008

This Trip Is open to all Federation Members , Wives and Parteners so make it a trip to be remembered.



For Local Details.
please contact.....
Palmerston North.Ph. 357 0566
Wanganui.....344 5924
Hawera278 7666
Stratford.....765 5008.

To all Club Members, dont miss your next meeting,for final details of the Bus Trip., Also the Club has recently purch-ased a large quantity of Meccano in Very Good conditionand we will auction the collection, together with the Meccano Magazines at the next meeting.