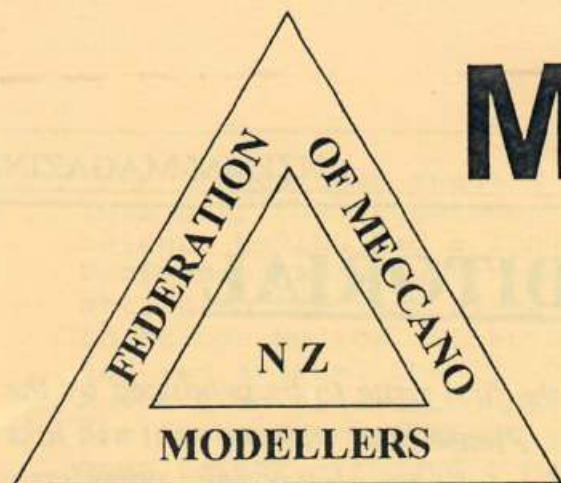
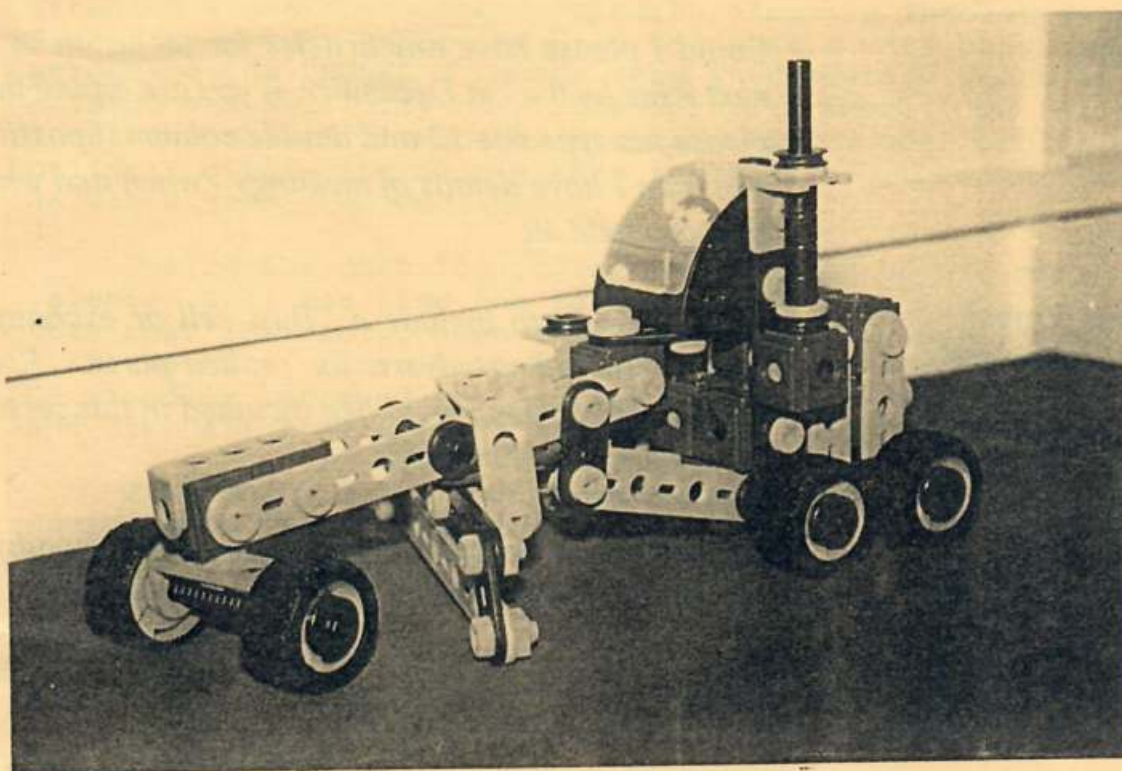




MAGAZINE

Vol 20 No 4 October 1996



PLASTIC MECCANO GRADER

Constructed by Wayne Blakely

*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

PRESIDENT:

David Wall
502 East Coast Road
Mairangi Bay
Auckland
09-478-6825

EDITOR:

Don Flowers
90 Holborn Drive
Stokes Valley
Lower Hutt
04-568-8008

SUBSCRIPTION:

\$18.00
covers six issues per year
posted within New Zealand
Forward to :
Max George
3A St John's Tce
Tawa
Wellington

EDITORIAL

Welcome to this the first issue to be produced by the Wellington Club. Please bear with me as it will take a while for me to get the newsletter done completely on computer, I have to learn the program as I am doing the newsletter.

Could I please have any articles for inclusion in the next issue by the 7th December, if you are typing them please use type size 12 and double column if possible. Also can I have details of meetings - when and where they are held etc.

We also want to include a "Buy, sell or exchange" section including adverts for replica parts. If you have anything you would like included in this section, please forward the details.

As new Editor I would like to extend my sympathy to the family of Bill Watt.

NEW ZEALAND MECCANO CONTACT PERSONS

AUCKLAND	David Wall, 502 East Coast Road, Mairangi Bay	09-478-6825
	Brian Buchanan, 288b Manukau Road, Epsom	09-524-5186
WAIKATO	Don McClelland, 32b Hazelwood Avenue, Hamilton	07-847-4503
HAWKES BAY	Trevor Adam, 22 Ferguson Street, Bay View, Napier	06-836-6827
MANAWATU	Bruce Geange, 4 Winchester Street, Palmerston Nth	06-357-0566
WANGANUI	Tom Pitams, 28 Pauri Village, RD 2, Wanganui	06-345-6788
TARANAKI	Lindsay Bond, 93 Hathaway Street, Stratford	06-765-5665
WELLINGTON	Bryan Jones, 9-21 Islington St, Trentham, Wgtn	04-528-3988
	Laurie Webb, 70 Calabar Road, Wellington	04-388-9638
CANTERBURY	Graeme O'Neill, 49 Hindness Street, Christchurch	03-322-7456
	John Ince, 37 Burnside Crescent, Christchurch	03-358-7351
OTAGO	Karen Murcott, 56 Aytoun St, Shiel Hill, Dunedin	03-454-3457

BITS AND PIECES

I know that readers will share with me a strong sense of loss over the recent death of Bill Watt. He was a man of many talents having had a long and distinguished career in the Medical Profession serving throughout the war as a Medical Officer and attaining the rank of Major. When peace returned he went on to become Medical Superintendant of the Rotorua Public Hospital and was awarded the Q.S.O. in recognition of this service. Apart from his career Bill was also a gifted pianist, skilled fly fisherman and above all a devoted husband, father, and grandfather - indeed a man for all seasons.

My own friendship with Bill stemmed from our mutual fascination with all things Meccano and in this respect he often put me to shame. I cannot remember a single occasion when Bill attended a meeting without bringing along an innovative model. Just a few weeks before he died he spent a very busy two days attending the "MODEL X" hobby show in Henderson where he exhibited a large and skilfully constructed Ferris Wheel. On reflection I believe that Bill was the Auckland Club's most prolific model builder, displaying also a keen interest in other members' models. He was a committed Meccanoman.

During the past 10½ years, in addition to his many other talents, Bill was also the Editor of our Magazine. He filled this post admirably, when copy was short Bill never failed to fill the gaps, often with interesting details of his own models. He steadily improved the quality and appearance of the magazine and like all true Editors always met his publishing dead-lines.

Throughout his years of involvement in our hobby Bill contributed a great deal to the New Zealand Meccano movement and in recognition of this was made a Life Member of the Federation in 1991.

On behalf of all New Zealand Federation Members I extend our sincerest sympathy to Bill's wife June and his family.

We will miss you Bill.

David Wall

IsoMechanisms

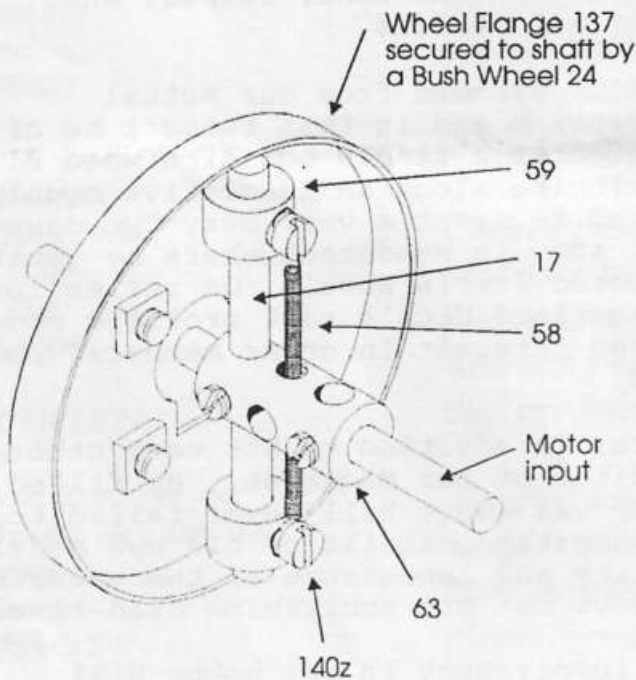
By Colin Croft

In the last issue of this magazine I gave an introduction to computer graphics. In this and the following issues I will be presenting mechanisms from early Meccano magazines, drawn up using IsoMec. Some of these mechanisms, I have found, can be updated using relatively new parts. In these cases I will endeavour to show both mechanisms, as in the two clutches below.

I have also attempted to choose mechanisms that are perhaps not so well known, or were not published in any of the Mechanism Manuals.

My thanks to **Lou Nichols** for supplying the content of this and the following columns.

Automatic Clutch



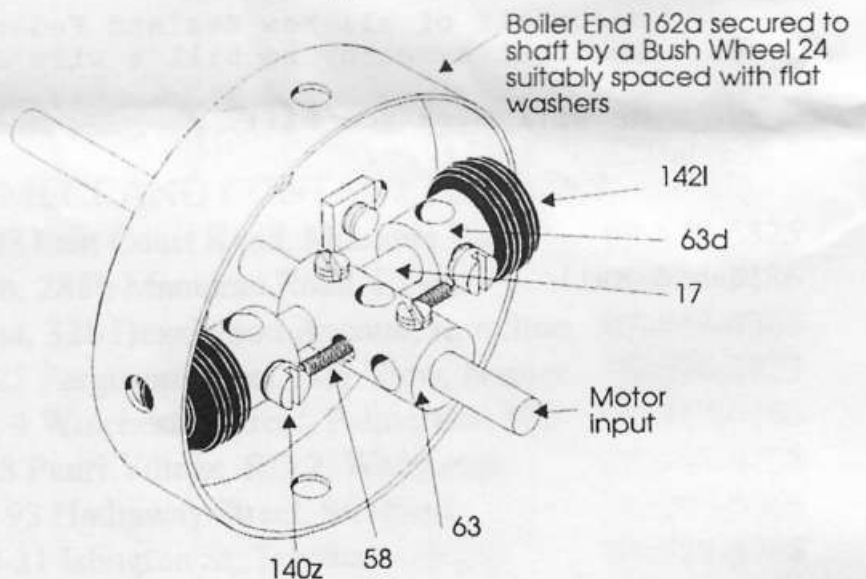
The Automatic Clutch appeared in Meccano Magazine in November 1931.

It's operation is very simple. As the clutch gathers speed the Collars 59 are centrifugally forced outward and so make contact with the rim of the Wheel Flange 137, ensuring drive to the model. If the motor detects resistance, the Spring Cord, attached to the two Collars, will take over and disengage the drive.

This mechanism is particularly useful for driving heavy models, where a slow start is more desirable and so giving realism to the model.

The Centrifugal Clutch (better described as) works in exactly the same manner. It takes advantage of some of the relatively new parts, in particular the Aero Tyres 142I, which are available in the new Collection Series. These are placed over Short Couplings and together with a Boiler End make an improved and almost silent drive.

Centrifugal Clutch



BITS AND PIECES

from Lloyd Spackman

WATCH YOUR PRICES !!

Meccano France 'Collection' series sets:

\$12.95 each in Devonport

\$14.95 each in Takapuna

\$19.95 each at Wairau Park "Hocus Pocus" store.

HOCUS POCUS TOYS

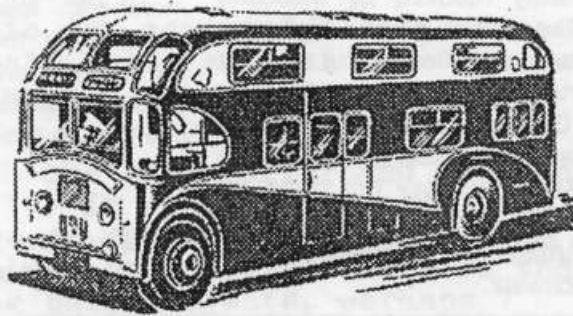
Opened its new franchised Link Drive, Takapuna, store with a good window display of Meccano - mainly Junior Plastic sets and the 'Collection' series. Centrepiece of the display was the factory built FERRIS WHEEL which has been around for a while. It needed some attention before it would work.

THIS FERRIS WHEEL

has a drive from its MO motor by a driving band, $\frac{1}{2}$ " pulley to a 2" pulley; then a worm to a 57t gear; finally a $\frac{3}{4}$ " pinion to a $2\frac{1}{2}$ " gear, offset one hole to give a better mesh. As there is no clutch, that final drive is a weak link in this attractive model. If the wheel is run faster than very slowly, then stopped, the backlash will loosen the grubscrews on the $\frac{3}{4}$ " pinion.

1931 SET 7:

Peter Matthews in Johannesburg, S.A., has bought a 1931 No. 7 set in its original cabinet in very good condition. Cost was R.3000 (approx \$1000 N.Z.), which Peter says was a lot of money but it was a 'once in a lifetime scoop'. Peter has been negotiating with Meccano France to obtain the Meccano agency for South Africa.



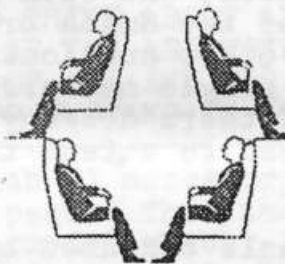
From Midlands
Meccano Guild News-
letter, Apr., 1996.

BOX GIRDERS:

To build a stable box girder from a pair of angle girders bolt them together through their round holes with a $\frac{3}{4}$ " bolt.

Place on the bolt inside the girders two standard collars and a washer. These prevent distortion of the girders. Depending on the length of the box girder, two or three (or more) bolts will be required.

HINT - put all bolts through the first girder, add collars and washer, then place the second girder over all bolts at the same time and complete with washer and nuts outside.



Half-deck
Coach. No upper deck, but there are seats up and down. Would you like to sit on the head of the passenger below? The sketch shows how it is done. A clever idea - it has many advantages.

FROM KEITH CAMERON:

Only a few Märklin parts have advantages for the Meccano builder. They are: the two Ring Plates, the 30-T pinion (slightly smaller than the Exacto one), and the 75-T gear. The system long ago had 1"x $\frac{1}{2}$ " DA Strips (they are used in the Crane on page 7) but now Meccano has them, and with a useful central hole. There are also a few small special parts with holes at non-standard centres,

BITS AND PIECES

from Lloyd Spackman

MARATHON MAN:

Julian Avisenis from Gisborne delayed his Meccano building in June while he travelled to South Africa to compete in an ultra-marathon road race 90km long.

Julian said, "I have run it twice before so should have learned my lesson by now ! Unfortunately the human mind tends to remember the good parts and effectively blocks out memories of exhaustion and discomfort. There will be over 13,000 runners taking part, including several hundred from overseas. So at least the atmosphere should be a good memory."

What's In a Name? (2): The Bulletin of La Penya del Cargolet, the association of Meccano enthusiasts in Barcelona, reported in its October 1995 issue that the Amis Meccano de Suisse, The Swiss Meccano club, had decided to change its club name. This was apparently after the Club des Amis de Meccano de France had been sternly rebuked by Meccano S.A. The Swiss club, which has always been involved with a number of construction systems available from France, Germany and Italy as well as Switzerland, will retain its well known initials AMS, but they will stand for Amateurs de Modèles métalliques en Suisse/Amateure für Metallmodellbau in der Schweiz.

Protecting the Good Name

A strongly worded letter was sent to the Club des Amis du Meccano in France, by the legal department of Meccano S.A., in regard to inclusion in an illustration in the club *Magazine* of a picture of a Steel Tec set. This was followed by some complaints to club officials from members, followed by a strong editorial by the president, Maurice Perraut, reviewing the club's past and present relations with the firm and the intention to maintain those relations.

Thanks to Southern California
Meccano & Erector Club Newsletter.

ANY TWINS OUT THERE ?

Transvaal Meccano Guild has two members who are identical twins. Both live in Port Elizabeth, and both are keen Meccano modellers. The models and designs of the Smith brothers have been featured in Meccano Magazine and other publications. T.M.G. has given them a single membership between them to mark their unique status. If there are any of the same in N.Z., our Federation will be pleased to extend the same courtesy.

QUOTATION:

"a child's Meccano set half consumed by the flames"
From "The World's Greatest Flying Mysteries" - thanks to T.M.G. Newsletter.

THE ULTIMATE GIFT !

A metal stamp with the lettering in mirror image. Press it into your sliced bread and your breakfast toast comes with a cheery "Good Morning" or "Have a Good Day" stamped on it.
(Helene Hanff in 'Letters from America')

Keith W. Cameron,

Many thanks again for another interesting and well produced *NZFMMM*. The illustrations have come out nicely, the clock ones on pages 4 and 5 are especially clear, probably due to the half-screen of the originals, still clearly visible under a magnifying glass. And the clock is a good one. I've built it several times with good results. I replaced the 50-t gear 29 with a 60-T gear because our current is 60 hertz.

THOUGHTS OF A VETERAN MECCANOMAN

EXTRACTS FROM LETTERS FROM FRANK DAVIS OF ROTORUA.
Frank has recently got his second (Meccano) wind !

WARNING: Purists may read this at their peril ! (Editor)

"I have now started on a twin beam steam engine to my own design. Making it up as you go along is good therapy for elderly brains and I am getting quite used to pulling sections apart for the second and third time because the concept doesn't work.

I am able to tell you that MURPHY'S LAW is alive and well in Meccano. The bolt that you struggle to insert in that most awkward place turns out to have a stripped thread when you try to fit the nut to it !!

LATER: I've got the twin beam model steam engine ticking over at last, after much trial and error. Powered by my CORDLESS DRILL. Meccano buffs would be a bit horrified:

The twin cylinders are Marley plastic 6cm tubes suitably drilled with 5/32" holes and painted Meccano red. The valve tubes are 15mm plastic, also painted red and I have the valve mechanism operating off the beams independent of the piston rods. As I say, much mumbling, but eventually it came right.

The surreptitious use of plastic can certainly extend Meccano and when drilled with appropriate holes and painted does not detract from the final appearance.

Which raises a point:

Why did Meccano stop short with one grey boiler and ends and a cup for the chimney extension ? It would have been quite possible to offer a small range of metal tubes which, I am sure, would soon have been found a place by model builders of those days. Difficulty in packaging bulky objects, perhaps ?

I FIND MECCANO INTENSELY STIMULATING
FOR THE WINTER MONTHS == ALWAYS
SOMETHING TO THINK ABOUT AND PONDER
OVER. IN CASE YOU ARE WONDERING, I
AM 76 YEARS OF AGE AND WAS FIRST
INTRODUCED TO MECCANO IN 1928.

I was recently given a French C1 accessory outfit which included a 6 volt motor and battery pack. This inspired me to have a go at the TRACTION ENGINE supermodel which, because of lack of parts, I had to modify a bit. I made a metal rim for the rear wheels out of colour steel roofing sheeting and connected it to the central boss by 5-hole strips. The final large gear drive had to become a sprocket and chain one. With about the same gearing shown in the leaflet I got the motor down to a slow crawl and ended up with a quite successful model, receiving some derision from my wife as I videoed it plodding steadily around the front lawn.

One of these days I will have a go at the BALTIC TANK supermodel. It is the Walschaerts valve gear that interests me. I am also a member of Rotorua Railway Enthusiasts Group and as well as attending various steam turnouts we see some jolly interesting videos from around the world. "

(Edited by Lloyd Spackman).

MODEL X'96: MANY THANKS to the dozen or so Auckland Club members who contributed models and manned our display at Model X'96.

Here is a list of the models we showed:

LLOYD SPACKMAN - Oil Well Pump, Chinook Helicopter, Benz Cycle Car and 3 wheel Moto-Cart.

GRAEME WRIGHTSON - A Railway Crane and a Tower Crane, both neat models.

BRIAN BUCHANAN - a model of a Saphier car, very wedge shaped, in nearly all yellow plates contrasting with the yellow of George Ovenden's models.

BILL WATT - his big Ferris Wheel was the centrepiece of our display, and attracted much attention.

DAVID WALL - his beam engine ran, as usual, smoothly and silently. It is driven by a Meccano factory mains motor.

BRUCE HAINES - an excavator and a tractor unit with two big container trailers. Also his two little Steeltec models.

BOB McCracken's Meccanograph received plenty of use by the young people and drew some attractive patterns.

GEORGE OVENDEN needed a whole table for his excellent display. It included a large low loader and tractor unit, total length about 4'6"; a red jeep with cab over; a very detailed Mississippi paddle steamer, mainly in yellow; and a merry-go-round with little passengers on its cars.

It is worth noting that all the moving models ran almost without stopping for 7 or 8 hours each day of Model X '96.

A Meccano Home Page (Website) on the Internet has been published by the International Society of Meccanomen (ISM). If you want to look at ISM's Website, the location name for the index page is:

<http://www.users.dircon.co.uk/~erebecca/index.htm>

On the Website, which has only been in operation since the beginning of March, you will find details about the ISM such as its aims, membership and its office bearers. And you will already find items of particular Meccano interest including:

What is Meccano?
Meccano Dealers Worldwide
Spanner
Related Topics
Forthcoming Events
List of parts and set contents

Meccano Parts.

I now have stocks 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 \$5/50 and $1\frac{1}{4}$ " length for \$6/50. $1\frac{1}{8}$ " length is not manufactured. My stock of nickle plated $\frac{1}{4}$ " bolts is now exhausted except for some I am retaining for my own use. I will have ZP $\frac{1}{4}$ " bolts with square nuts for anyone who needs them. They will be about \$130/1000; other quantities by arrangement.

Replica parts from Newton Engineering are still available In particular:-

Angle girders -	18 $\frac{1}{2}$ "	\$3.50	(\$4.00 painted)
	24 $\frac{1}{2}$ "	\$3.80	(\$4.50 painted)
Flat Girders	18 $\frac{1}{2}$ "	\$3.20	
	24 $\frac{1}{2}$ "	\$3.60	
Flat Plates	5 $\frac{1}{2}$ x 2 $\frac{1}{2}$	\$3.10	
	5 $\frac{1}{2}$ x 2 $\frac{1}{2}$	\$3.50	

Finish electrogalv with sharp corners except as noted. Orders to John Ince, 37 Burnside Cres., Christchurch or phone (03) 3587351 after 10pm is OK.

Bicycle Tyres

by Dave Heathcote

For a narrow, smooth looking tyre that is suitable for any diameter, I used 'O' Ring cord, that is available in many sections, and sells by the metre. It can be used on standard pulleys, but has the advantage of being able to be used on non-standard rims e.g. circular plates and strips.

Form the cord around the rim and cut it 4-5mm shorter to give it tension when installed. Note that a keen edged knife is needed to get a smooth cut. Cut the cord square otherwise a crooked joint will result. Then use superglue to join the ends. After it has set, you may trim the joint with emery paper.

Observe the normal precautions with superglue or you may become more attached to your model than you intended.

(Thanks to Transvaal Meccano Guild Newsletter, Dec.'95.)

SECOND SIGHT

MECCANO

Metal more attractive?

THIS ARTICLE
about MECCANO
appeared in the
English
"Sunday Telegraph"
in June, 1995.

It is typical of
many articles
that have been
written for the
English news-
papers from time
to time.

For it, we wish
to thank David
Wall's brother,
Malcolm.

THE oddest thing about Meccano is that it survives at all. Like a copy of *Boy's Own Paper*, or an Imperial Airways flying-boat, it flickers in the memory like a black-and-white newsreel.

Now the 20th century's oldest construction toy has come of age. The company that makes Meccano has just introduced a power tool as an alternative to the spanner. It is a little like seeing the Queen on a mobile phone.

Meccano is a middle-aged man rummaging under the sofa for the missing stanchion from his model Forth Railway Bridge. But the image it now seeks is not a lost childhood, but *real* children, preferably putting aside their Power Rangers for the power tool.

Traditionalists think Frank Hornby would be appalled. But Hornby was a man of his time, a Liverpool book-keeper who roughed up the first set to entertain his son. By 1905, four years after he patented Mechanics Made Easy, there were Meccano kits in two continents.

Hornby was a brilliant entrepreneur. Schools were persuaded that the toy was "educational". Prizes were offered for the best models, with Royal Meccano created to mark the 1910 Coronation.

By the 1950s Meccano had become an international best-seller. Hornby was elected as the Conservative member for Everton in 1951 and died five years later. The company continued to expand — even if the illustrations on the box did somewhat exaggerate the potential of the contents. Dinky Toys and Hornby Dublo model trains were two of the new lines.

Then, after the last war, came a slow decline. Like Britain herself, Meccano retreated from the world stage. The Sixties were the worst of times. Lego, a plastic construction toy imported from Denmark, represented the new permissive spirit of the age. Harold Wilson was a former secretary of Huddersfield Meccano Club, but that did not seem to help.

The original Liverpool factory closed in 1979, a victim of the recession. Today Meccano is produced near Calais, under French ownership. The company has increased its turnover five times since 1990 and plans to invest more than £8 million by the end of this year.

But even with the power tool, Meccano will never regain the dominance it once enjoyed. Like the election of a Conservative MP in Liverpool, some things seem for ever destined to remain in the past.

James Langton

N.Z.F.M.M. MAGAZINE ACCOUNT

Income & Costs 1/9/95 to 31/8/96		1994/5
Balance in Bank a/c 1/9/95		2596
INCOME: Subscriptions:	2304.60	2148
Advertising:	50.00	60
	<u>2354.60</u>	<u>60</u>
	5110.97	4804
LESS COSTS:		
Printing 6 issues	1405.60	1284
Postage "	683.90	521
Photos & Bromides	50.00	90
Envelopes	121.20	66
Labels	-	77
Sundry	5.65	10
	<u>2266.35</u>	<u>10</u>
Balance in Bank a/c 31/8/96	2844.62	2756

NOTES: With 4 out of the 6 issues being 20 pages, costs were higher and the bank balance is stabilising. Copies printed remain at between 140 and 150. 23 copies are mailed overseas; eleven of these are 'free' or exchange copies.

FLEXIBLE PLATE

PROCESSOR

by Roger Hill
Transvaal Meccano Guild
South Africa

Because this device is well worth presenting to a wider readership, we ask members of the Transvaal Meccano Guild to forgive us: they've seen it already, in their club Newsletter. The pressure between the first two rollers is very great, and with the rolling (bending) effect of the third roller, major kinks in old Meccano flexible plates are well flattened out. And yet it is kind to existing paint on the plates.

Getting rid of those kinks and creases in flexible plates has always been a serious problem. The mechanism described on these pages sets out to effectively solve that problem. It is strong yet simple in design and construction and uses surprisingly few parts.

The Flexible Plate Processor works on the principle that if you bend a plate while, at the same time, applying a strong pressure to the plate, kinks and creases will be minimised and, in some cases, they will disappear completely. Once bent, the plate can be flattened by putting it through the rollers the other way up. So, as well as being a plate bender, this mechanism also acts as an excellent plate flattener. Plates with serious kinks should first be bent in one direction and then turned over and bent the other way. Comments have been made that a mechanism of this type will stretch the plates being processed - but I have found no evidence of this whatsoever.

The base that I used for the plate processor is a replica flanged plate, part number 50r. Any other base of similar proportions will suffice. In the following description, 'left' refers to the left side of the model as viewed in the main picture.

The left-hand side of the main frame is made up from a 2 1/2" x 3 1/2" flanged plate (part 53) supported by two flanged brackets (parts 139 and 139a). The flanged brackets are attached to the base by two 1 1/2" angle girders (part 9f).

The right-hand side of the main frame is made up from another 2 1/2" x 3 1/2" flanged plate (part 53) supported by two 2 1/2" x 2 1/2" flat plates (part 72) attached to the flanged plate by two 2 1/2" angle girders (part 9d). The flat plates are attached to the base by two 2" angle girders (part 9e). The top right-hand ends of the flat plates are held rigidly by a 2 1/2" x 1/2" double angle strip (part 48a). Thick washers are used to space the double angle strip from the flat plates. The 'cage' created by the flanged plate and the two flat plates serves as the gear box for the model.

The bending/flattening mechanism uses three wooden rollers. I used rollers without grooves to make a continuous smooth surface for the plates being processed. Each roller is mounted on a rod using collars inserted into the ends of each roller. A 3/4" washer is then used against the end of the roller and collar.

Only one of the three rollers is driven. This is the bottom of the two rollers seen quite clearly in figure 1. The gear box is shown clearly in figures 1 and 2. Note that double-arm cranks (part 62b) have been used to strengthen the points at which the axle holding this roller (the main drive axle) are journaled. The main drive axle in my model is a non-standard length of 9". A standard 11 1/2" rod could be used.

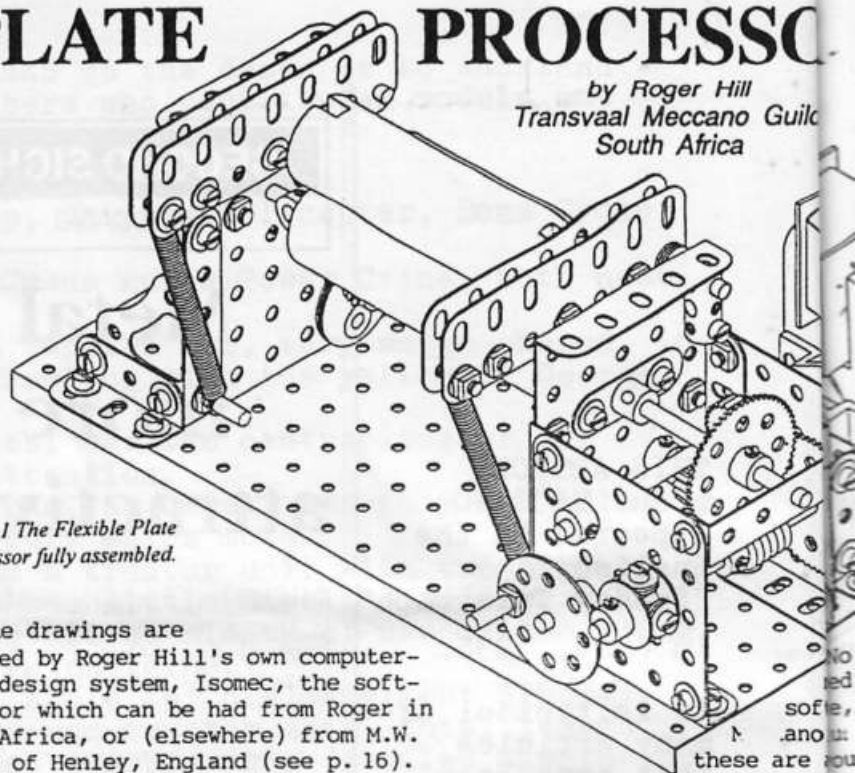


Fig. 1 The Flexible Plate Processor fully assembled.

All the drawings are produced by Roger Hill's own computer-aided design system, Isomec, the software for which can be had from Roger in South Africa, or (elsewhere) from M.W. Models of Henley, England (see p. 16).

NOTE: This machine may be made even more sturdy, if so required, by doubling the bearings and other moving parts.

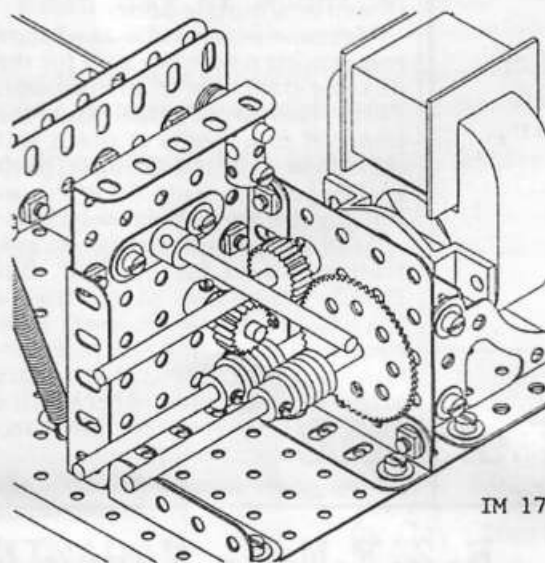


Fig. 2 The front of the gearbox and some of the gearing has been removed to reveal the rest of the gearing. Also revealed is the worm and pinion gearing for rotating the eccentrics to raise and lower the third roller

I used a fairly powerful mains induction motor to drive the mechanism but any suitable motor can be used if geared correctly. The rotation of the roller, which is securely fixed to the main drive axle by bolts (37b) in the collars at each end of the roller, must be fairly slow and I achieved this by using a worm in the drive. Note the neat thrust bearing on the end of the shaft holding the worm. This bearing is constructed from a four-hole collar (part 140y) into which are screwed four bolts (37b) each holding two thick washers. The bolts are secured to the collar with nuts. The washers must be free to rotate on the bolts and the collar must be free to rotate on the shaft. The bearing is sandwiched between two 3/4" washers (part 38d). A second thrust bearing of identical construction is used on the left-hand end of the main drive axle on the outside of the main frame (this is hidden by the left-hand end of the frame in the diagrams).

SEVERAL SOUTH AFRICAN MECCANO BUILDERS HAVE BUILT REPLICAS OF THIS MACHINE. THEY'RE ALL STRAIGHTENING OR BUCKLING FLEXIBLE PLATES.

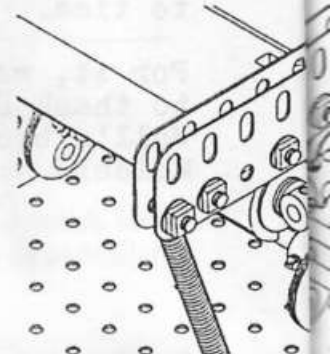
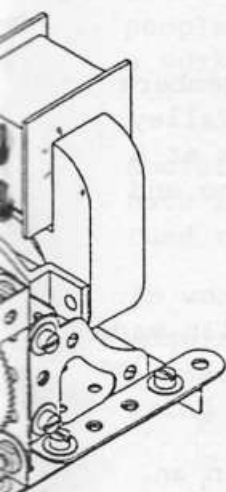


Fig. 3 The gearbox and motor have been completely removed to reveal the arrangement of the side of the frame supporting the pressure roller.

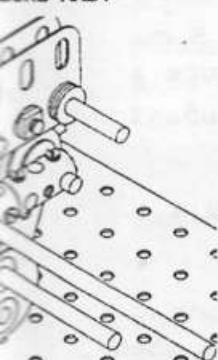
When constructing the gearing, the roller must rotate in a clockwise direction looking at the mechanism from the front in figure 1. In other words, the plate is inserted in the front (as seen in figure 1) and comes out at the back. In my model, the motor when viewed as in figure 1 rotates clockwise. A 1/2" pinion (part 27a) outside the gear box on the shaft of the motor engages with a 27a gear (part 27d) on another 3 1/2" shaft. This pinion engages with a 27a gear (part 27d) on another 3 1/2" shaft. This worm engages with a 1/2" main drive axle.

A second roller, the top of the two rollers seen in figure 1, acts as a pressure roller. This second roller is loosely held between the two side frames, one of which is shown in figure 3. Each side frame is made of two angle girders (part 103d) spaced apart by two flat plates (part 111a). Each side frame is secured to the main frame by a bolt (part 111a). Each side frame is shown in figures 1 and 2. Each



No artistic skill needed! Get IsoMech, and splendid illustrations like your fingertips.

MECHANISMS HAVE MACHINE, AND G OUT THOSE LIKE MAD!



been removed of the eccentrics. One sure "er is also

note that this driven direction when the right of the view plate to be processed in figure 1) and model, the rotation of the diagrams was (6) on the output a 1 1/2" gear (part 3 1/2" axle rod. On gear box is a 3/4" gears with a 1 9/16" rod journalled two in the sides of the rod is a worm (part 1 1/2" gear on the

so seen clearly in on the first, driven by journalled in two down more clearly in de from two 3 1/2" flat t by collars (part 59) securing 1/2" bolts hinged on a short rod coupling (part 63) as coupling is fixed to

the main frame by a 1/2" bolt (part 111a). The side frames are spaced away from the main frame by a suitable number of thick washers. Care should be taken to ensure that the side frames are free to rotate at their hinge points and that the pressure roller is free to rotate between the side frames. Downward pressure is applied to this pressure roller by tension springs (part 43) attached to the front end of each side frame on a lock-nutted 1/2" bolt (part 111a). The springs are loosely attached at their lower ends to threaded pins (Part 115) fixed to the bottom of the main frame as shown. In my plate processor, I used two springs on each side to really provide strong pressure. When the mechanism is not in use, the springs can be slid off the threaded pins to relieve the tension.

The third roller is the one used to bend or flatten the plates. The axle on which the roller is loosely journalled is securely fixed in the ends of two compound couplings as shown. Each compound coupling is made up from a short coupling (part 63d) and a normal coupling (part 63) joined with a short rod. These compound couplings are hinged at their front ends on the main drive axle. Care must be taken in the alignment of the compound couplings to ensure that the bending roller can rotate freely on its axle and that the compound couplings do not foul the drive shaft.

In figures 1 to 4, this bending roller is shown in its lower position, the position used to flatten previously bent plates. The bending roller is raised and lowered by rotating two eccentrics (part 130a) on an axle below it as shown in figures 3 and 4. The top ends of these eccentrics are loosely fitted onto the axle on which the bending roller is journalled. Care should be taken to ensure that the eccentrics rotate in unison and that the top ends do not foul the free rotation of the bending roller on its axle.

The end of the axle to which the eccentrics are fixed protrudes into the gearbox as can be seen in figure 2. On the end of this axle is a pinion (part 26) which engages with a worm (part 32) on another shaft which protrudes from the front of the gearbox. This shaft is turned by a bush wheel (part 24) into which has been fixed a threaded pin (part 115) - see figure 1.

In figure 5, I have shown the effect of rotating the eccentrics. As the bending roller is raised, so the amount of bend to the plate being processed is increased.

Happy plate processing!!!!

© Roger Hill

Acknowledgements: Transvaal Meccano Guild, and Roger Hill.

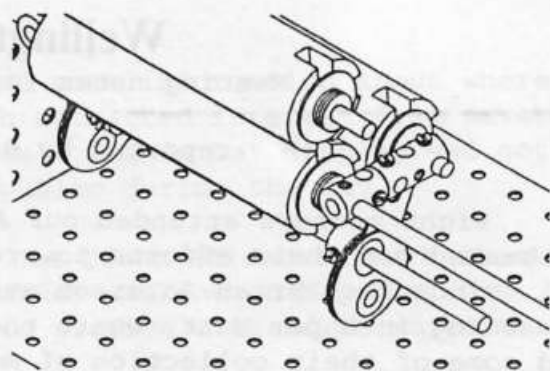


Fig. 4 One side of the frame supporting the pressure roller has been removed to clearly reveal the journal support for the third roller

Parts used:

Nuts (37a), bolts (37b), thin washers and grub screws (69a) not counted

9d	2	38	35	111a	10
9e	2	38d	10	115	3
9f	2	43	2 or 4	130a	2
14	1	48a	1	139	1
15a	2	50r	1	139a	1
16	3	53	2	140y	2
18b	4	59	24		
24	1	62b	2	9" rod	1
25	1	63	4	Electric motor	
26	2	63d	2		
27a	2	72	2		
27d	1	103d	4		
32	2	106	3		

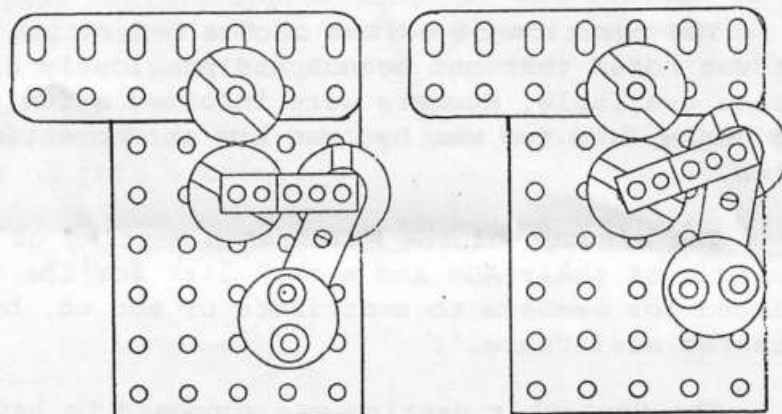


Fig. 5 Cross-section showing how the third roller is raised or lowered by rotating the eccentrics.

Wellington Meccano Club

Meeting notes for August and September 1996

-reported by Bryan Jones and Mike Highley

Eight members attended our August meeting, with two apologies. Members were thanked for their efforts towards the combined July meeting at Sun Valley School. Since then Brian Peterson and Bryan Jones had been guest speakers at a Cubs meeting in Upper Hutt, where they talked about the history of Meccano and showed some of their collection of models.

Colin Croft had been busy checking out the Internet for Meccano references and had found the ISM Web site and downloaded some pages to show us. There are references to Meccano in over 400 Web sites world wide, and Colin made contact with a contributor named Roger Hill, who is keen to receive any articles or Isomec drawings for publication on Internet.

The models displayed were:

Colin Croft showed a centrifugal clutch developed from a model in an early Meccano Magazine. It had been updated to use Aero Tyres as the driving elements, inside a boiler end as the driven element. The tyres provided a higher degree of friction, allowing heavier models to be eased into movement as the clutch engaged.

Mike Highley brought a model of a 2 ton mobile crane, built from the No 6 Manual.

Simon Moody had been busy making short socket couplings, only 12.5 mm long instead of 16mm, and he demonstrated how these could be used to produce a compact gearbox of 27:1 reduction on two shafts (3x 3:1 stages fitting in a 2.5 inch space).

Brian Peterson had been buying the new Starter Sets, and produced a 4x4 Dune Buggy as his contribution.

The position of editor of the Federation Magazine had become vacant and it was noted that our branch had previously offered to take up the job when it became available. Members were informed a few days after the meeting of Bill Watt's death, and two who had met him at Conventions shared anecdotes and tributes.

The minutes of the MWT branch meeting of 4th May were received, together with a note of their AGM and a task list for the 1997 Convention. The list was circulated for members to contribute or add to, but so far no one has volunteered assistance.

The September meeting was supposed to have been the set up night for The Great Models and Hobbies Expo in Lower Hutt, but the promoter informed us in the previous week that it would not be proceeding due to a lack of sponsorship. A meeting of 10 members was therefore held at St Lukes, with one apology.

Bryan Jones, Brian Peterson and Simon Moody had represented the Club at the Upper Hutt Sports and Leisure Expo on Sunday 18th August, joining about 64 other clubs in showing the public some of the leisure activities available in the region. We had a table with plenty of smaller models showing a range of

things that could be built with Meccano, and some information about where it could be obtained and about the Club, which attracted interest from several people. Bryan's tower crane was available as a "hands on" display and got quite a workout from the younger members of the public during the day.

Laurie Webb had been contacted by the Queen Elizabeth Park Tramway Society, who are holding a "Hot Air and Sparks" weekend on November 2-3. They have invited us, as well as other groups, to provide a stand to support their fund raising activities that weekend.

Colin Croft reported that he had received several Meccano related enquiries from overseas as a result of his interest in the Internet, and was preparing articles for publication on the Internet. The site address he is using is www.dircon.co.uk/meccano/ for anyone who may be interested in browsing.

Don Flowers has become the editor of the Federation Magazine and he talked about some of the ideas he has had for its production. He will be pleased to receive any material for publication, mailed to his home address (90 Holborn Drive, Stokes Valley, Wellington).

With the late notice of the meeting and the next Convention approaching, there was a smaller than usual turnout of models displayed.

Simon Moody had rebuilt his short socket coupling gearbox from last month so that it now had a reduction ratio of 1024:1 using spur gears only, and also showed the spreader frame for his container crane, demonstrating the features he had fitted so far.

Brian Peterson had five models from his collection with an army theme; a landrover, armoured car, ack-ack gun, howitzer, and limber (the latest addition)

With the end of the year rapidly approaching, it was decided to hold another Christmas dinner as last year's effort was very much enjoyed. A suggestion of Valentines Restaurant in Wellington on December 15th is to be investigated.

Joe Bell kindly offered to host the October meeting at his place, as St Lukes is normally unavailable on that evening.

A LETTER FROM STREATLEY

John Westwood writes: The Henley exhibition on 31 August was crowded with good models, and friends came from all over the U.K., and from Italy, Netherlands, Spain, New Zealand, and elsewhere. I showed my model of the last working watermill on the River Thames, with all mechanisms operating continuously. May I also mention my own new special publication, 'Modelbuilding Technology for Meccano Enthusiasts', a 32-page booklet (£6.40 from M.W.Models) which is a re-edited and re-printed assembly of everything on modelbuilding technology, collected over nine years, in IM magazine 1988-1996. 246 items from 87 Meccanomen, with 150 illustrations from my own drawing-board. Really an encyclopedia of bright Meccano ideas. At Henley, I was happy when Alan Douglas Haydon told me that he thinks it is 'FANTASTIC!'



President - Bruce
Geange; 4 Winchester
St.; Palmerston North;
(06) 357 0566
Secretary - Tom Pit-
tams; 77 Maria Place
Ext.; Wanganui; (06)
345 6788

MEETING REPORT 3 August 1996

Members gathered at Wanganui and Meccano items were presented as follows:

Wayne Blakely - Recently acquired tin boxed Erector 10½ Merry-go-round and Parachute Jump set complete with parachutes, horses and nut and bolt boxes; and a boxed 1938 E20B electric motor in deep blue

A self designed Plastic Meccano Grader with a working blade that swivelled and had side shift. The model was detailed with air cleaner and exhaust and was an impressive model within the modelling restrictions of the new Plastic Meccano.

Robin Rye - Showed a 1953.5* Manual with order forms for the Meccano Magazine and Meccano Guild still inside; Hornby Guild booklet, and a selection of 'eccentric' parts (off centre) found in recent boxed sets.

Robin also showed a built up axle with bearings made from ½" pulleys rotating around 3" pulleys separated by 5½" strips and Double Angle Strip. This will form the central hub for a reasonably large Ferris Wheel.

Daryl Anderson - THE Merry-go-round with further development such as 2 rows of 8 horses (all Meccano parts including 32 Pawls for ears) rising and falling majestically. An improvement to the action of strips on cranks was to replace spring clip holders with fish plates and washers. The model revolved smoothly for the duration of the meeting being driven by a 2-15 volt motor with clutch. And to make Daryl's day, Chris Morton had found at a garage sale, two records with appropriate fair ground organ music. So we await the full visual, illuminatory and aural extravaganza.

Don Blakeborough - Returned with the latest stage in his steadily growing HUMUNGOUS Dragline, The main machinery deck and the start of the motors to move the feet and winching drums, etc. was displayed. The movement to drive the eccentric arms and the ground shoes was demonstrated. Occupational Safety and Health (OSH) regulations have yet to be addressed with safety rails. However members were most impressed with the Glorious Green and Ravishing Red of Don's model. Don has a very large collection of Meccano in vary-

ing stages of Paint Perfection and has hummed and haed for some years as to the colour and then the shade of his eventual repainting saga. He has finally bitten the bullet and the results of efforts to date are most easy on the eye.

Don then demonstrated the proper use of Parts 2000 Claw Hammer, 2001 Small Vice, and 2002 Flat Trunnion with Two Bolts for the purpose of making Narrow Double Angle Strips with exactness and uniformity for the internal ladder work in his Dragline

Lindsay Bond - Presented two French Fighter planes based on the 1995/6 No 6 manual. The first had been built by Yvonne Bond in the style of a plane being serviced and the second built by Lindsay was ready for action. A comment from the builders was that some of the nuts and bolts would need forceps to get into some tight areas such as the tailplanes.

A favourite of Lindsay's repertoire is destroyers and this time the ship was in the current colours and mounted on a wooden base for realism.

Again from the 1995/6 No 6 book was an 18" revolving Radar Scanner. The silent running was achieved by band drive from a car tape deck motor. (Electric motor collectors please note).

And finally a commissioned work for the NZ Meccano agents, an Eiffel tower in yellow and nickel current colours. This model stands 5½ ft, is in 4 sections for packing purposes, and when assembled, each section rests inside its partner with magnets used as steadies. This model has captured the essential lines of the original and looks good.

Bruce Geange - His newly painted NZR Hornby 3 rail locomotive with working headlight was run up and down a short length of O gauge track and testified to Bruce's model engineering expertise.

NEXT MWT MEETING - Saturday 2 November 1996 at Wanganui. This will be the Wanganui Tour and BBQ. **READ YOUR MEETING NOTICE FOR FULL DETAILS**
Subscriptions of \$2 cash or stamps for 96/97 are payable now if you wish to continue as a member of MWT.

\$20 EXTRA! EXTRA! \$20

A prize has been donated for a model vehicle with THREE road axles, maximum overall length of vehicle 15", to be judged at the meeting 2 November. The judge will take into consideration junior and less experienced member's ability and the judge's decision will be final.

Bruce G and Bruce N

AUCKLAND CLUB NEWS

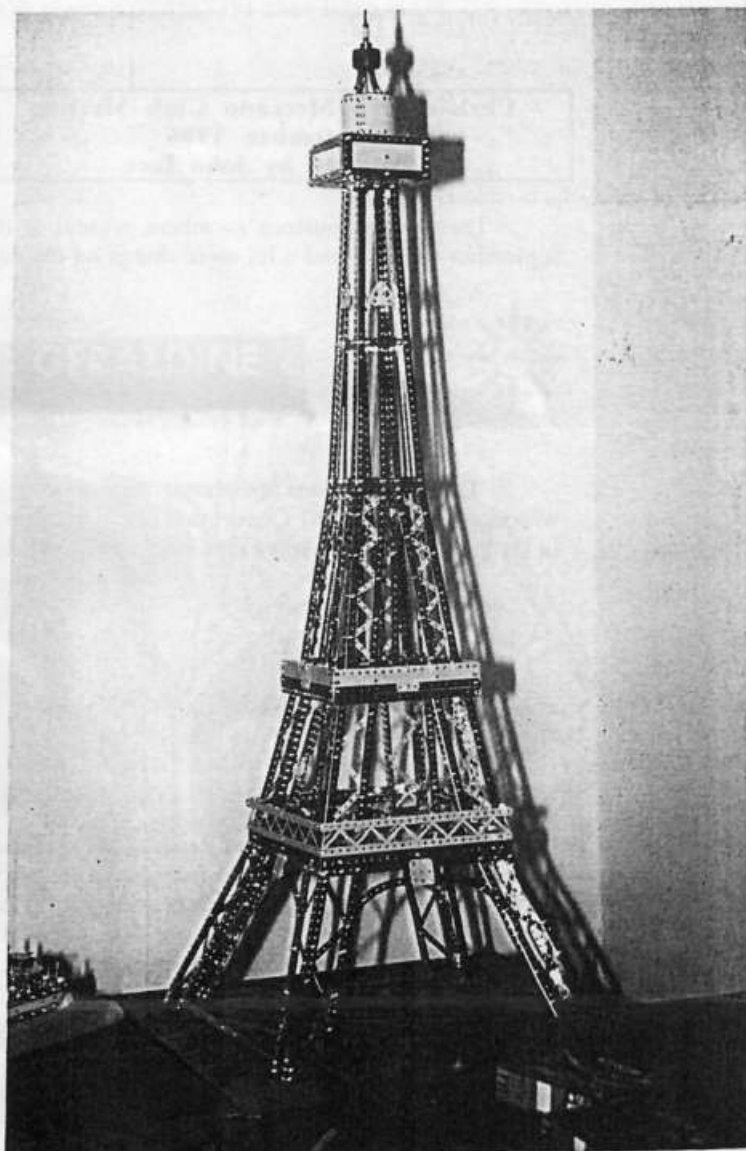
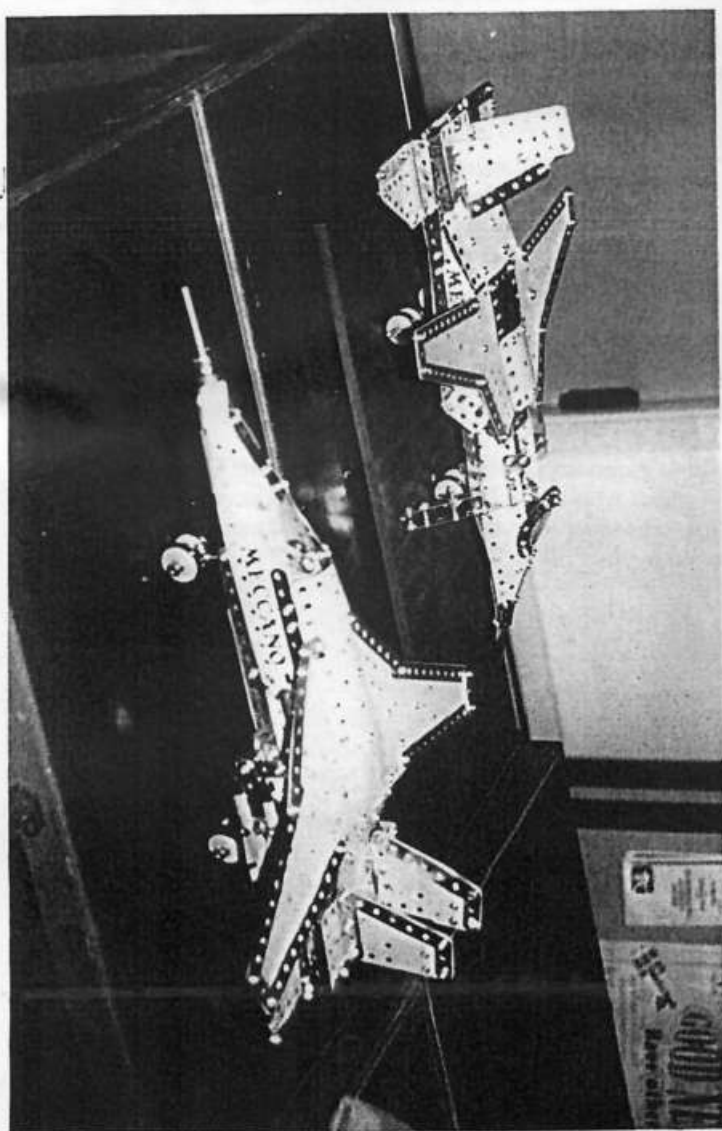
OUR AUGUST MEETING at Neil Carey's home was overshadowed by the death of Bill Watt a few days earlier. Many of our Club members have worked closely with Bill in modelling, at exhibitions and on F.M.M. Magazine production. We will miss him very much.

MODELS included a "Rider in the Sky" cyclist pedalling happily around his elevated circular track. This one was built by Brian Buchanan from C.Q. 6/95.

Peter Hancock had a yellow crane and a red/nickel lorry-mounted crane built from the 1995 French Master Builder Set. With small vehicle models it is often difficult to reach into the cab to turn the steering wheel. On top of the cab of Peter's model was a 1½" square plate which blended with the cab roof so well that only a close look revealed that it was actually the steering 'wheel'.

Lloyd Spackman has acquired a Märklin Metall Construction Set to augment his Meccano but has begun by building Meccano models with the Märklin, adding a few Meccano parts where necessary. His model was Mike Brammer's BEAM ENGINE from M.M.G. Gazette No. 11.

General discussion over Mrs. Carey's excellent afternoon tea wound up a pleasant afternoon.



Christchurch Meccano Club Meeting
August 1996
Reported by John Ince

There were sixteen members present at the August meeting. Unfortunately both Graeme O'Neill and Kingsley Burrell had work commitments which kept them away from the meeting. Neil Pluck arrived late but then he had driven straight over from Greymouth after work!

The only model on display was **John Ince's** Caledonian No 15 Locomotive which now has a tender. John also brought a box of parts which sold quickly to an enthusiastic group of Meccano hounds. Lets hope that some of these enthusiasts put them together into some interesting models. The meeting discussed a proposed visit to Geraldine in October to meet Doug Muff. We have been most impressed with his recent contributions to the Federation Magazine and would like to see examples of his modelling close hand.

Members were once again reminded of the advantages of subscribing to the Federation Magazine and also in joining the International Society of Meccanomen. **Peter King** said that he now had **MecInv** running on his computer to keep stock of his large Meccano collection. He calculates it as comprising in excess of eight No 10 sets! His wife was not impressed when she saw the calculated value of the collection but then he does use the Meccano for his work in assessing patents.

As usual Joyce and John Pluck had supper ready for us at 9 pm.

Christchurch Meccano Club Meeting
September 1996
Reported by John Ince

There were fourteen members present at the September meeting and a lot more things on display.

It was good to see **Graeme O'Neill** who has in recent months been tied up with work on Friday evenings. He is an expert in building gearboxes and differentials and showed us his six speed box and the front axle for the four wheel drive vehicle. The front axle features a normal diff. plus a pozitraction splitter differential. All very neat and compact.

Cameron McFarlane has been spending big on three new Meccano sets. These cost \$2.95 each and come in a small plastic bag. The three models were a helicopter, a racing car and a dragster. **John Crawford** has made good progress with his fire engine. **John Hamlyn** ran his excellent sweet running traction engine.

John Ince has also been spending and has bought one of the new Action Sets. This comes with two motors and an infra red control unit. He had built the front end loader which has remote control forward and reverse and steering. Meccano Calais have redesigned the battery boxes and motors to make them easier to attach to models. The wiring connections are now made with plugs which is much better than the earlier loose wire arrangement. Unfortunately this particular set has some obscure problem in the control box which means that it is not entirely reliable. It is a pity that Meccano have not provided any diagnostic information. The infra red control has a limited range and sensitivity. Unlike most TV and VCR remote controls it will not respond to reflected signals. John also brought his partly completed Motor Car chassis based on Super Model 1a of 1934 vintage.

Peter Gibson brought a 1981 Erector Set 725 which he purchased recently at a garage sale. **Neil Pluck** brought items for sale including an Ezybuilt No 6 set and a box of parts. **Ian Torrens** showed us his *The End* board with the words fashioned from Meccano parts. He uses it in his video editing.

The meeting concluded with supper prepared by **Joyce** and **John Pluck**.

These instructions and photographs are of a Meccano Radio Receiving Set owned by Graeme O'Neill. The set was featured at the 1987 Convention in Christchurch but seems worth featuring again. It was produced at Binns Road in December 1922 and was Frank Hornbys second attempt to produce a crystal set. The first used more Meccano parts but was not approved by the Post Office.

Geraldine Gathering. Christchurch club members have been so impressed with the contributions by **Doug Muff** in recent Federation magazines that we have decided to visit him in Geraldine. This event will be on Sunday October 27th at Doug's place (see map) It is suggested that you bring your own lunch but a cup of tea will be provided by the Muffs. Please bring a Meccano model if possible. The gathering is open to any South Island Meccano modellers who feel able to make the journey. Thanks to Doug for making this event possible.

Restoration of Brass Parts. Ideas from John Ince.

I have tried various methods including soaking in acetic acid. While this approach is simple the results are not, in my opinion, satisfactory. The residual stains require further polishing. I prefer an entirely abrasive approach which is most effective for circular brass parts. I use a spindle rotating at about 1750 rpm with a drill chuck. I do not have a lathe.

Circular parts with Boss: Secure a short axle rod in the chuck and mount the part with a short Allen grub screw so that the grub screw is recessed. Polish with 180 wet/dry paper used wet. Finish polish with Duco rubbing compound or something similar on a piece of leather also used wet. Clean up with a dry cloth. Reverse the item and polish the other end. When finished dust off and apply a thin coat of polyurethane varnish.

Circular parts without Boss: Mount a screwed coupling in the chuck and attach the part with a screw. Then proceed as above.

Meccano Parts.

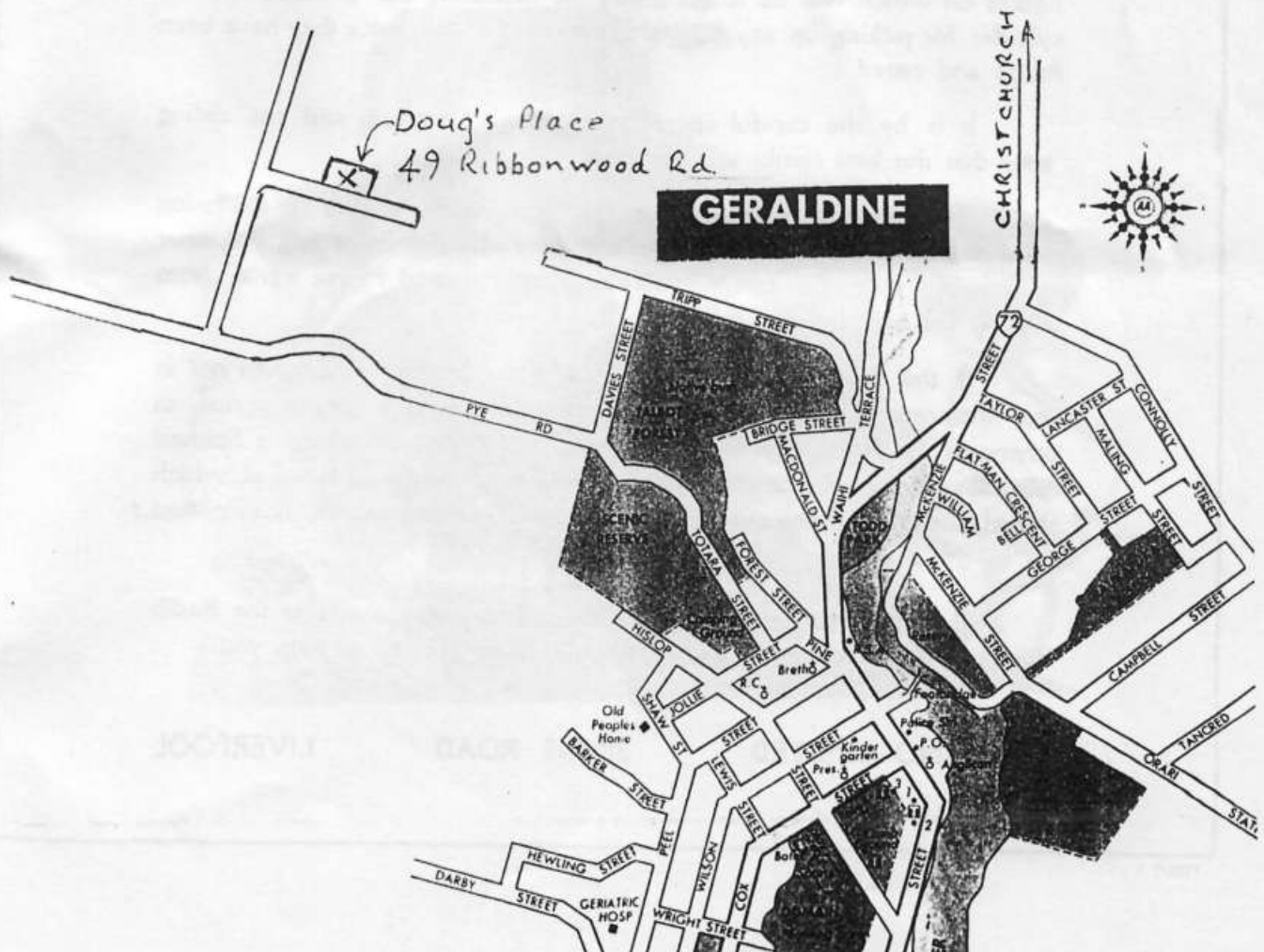
I now have stocks of cheese head, zinc plated $\frac{5}{32}$ " Whitworth machine screws. These are available in $\frac{3}{8}$ ", $\frac{1}{2}$ " and $\frac{3}{4}$ " lengths for \$5/50 and $1\frac{1}{4}$ " length for \$6/50. $1\frac{1}{8}$ " length is not manufactured. My stock of nickle plated $\frac{1}{4}$ " bolts is now exhausted except for some I am retaining for my own use. I will have ZP $\frac{1}{4}$ " bolts with square nuts for anyone who needs them. They will be about \$130/1000; other quantities by arrangement.

Replica parts from Newton Engineering are still available In particular:-

Angle girders -	18 $\frac{1}{2}$ "	\$3.50	(\$4.00 painted)
	24 $\frac{1}{2}$ "	\$3.80	(\$4.50 painted)
Flat Girders	18 $\frac{1}{2}$ "	\$3.20	
	24 $\frac{1}{2}$ "	\$3.60	
Flat Plates	5 $\frac{1}{2}$ x 2 $\frac{1}{2}$	\$3.10	
	5 $\frac{1}{2}$ x 2 $\frac{1}{2}$	\$3.50	

Finish electrolav with sharp corners except as noted. If you need shorter angle girders or flat girders you may buy the long lengths and cut to whatever size you want. Depending on what equipment available this can be quite labour intensive but handy to satisfy shortages in your stock of parts.

Orders to John Ince, 37 Burnside Cres., Christchurch or phone (03) 3587351 after 10pm is OK.





POST OFFICE REG. NO. 186
MANUFACTURED BY
MECCANO LIMITED

INSTRUCTIONS.

The Meccano Radio Receiving Set

CONNECT the insulated lead-in wire from the aerial to the terminal marked "Aerial" on the receiving apparatus, and one end of the bare earth wire to the terminal marked "Earth," the other end being connected to a water pipe or other metallic conductor entering the ground.

The detector-arm is adjusted so that the fine copper wire, or "cat-whisker," lightly touches the crystal. The most sensitive spot on the crystal should be selected by moving the cat-whisker, which should lightly touch, but not press upon, the crystal.

The slideable tuner is moved slowly along its slide until it reaches a point at which Morse or telephony is heard. Fine adjustment is then made until the best result is obtained. With P.M.G. aerial broadcasting will usually be found with the indicator at about "30" on the scale, the figures on which will be found useful for indicating the positions on the cylinder for picking up any ~~transmitting~~ transmitting stations once they have been found and noted.

It is by the careful operation of the detector-arm and the sliding ~~tuner~~ tuner that the best results are obtained.

The winding on the Meccano Receiving Set allows for ~~reception~~ reception on wave lengths from zero to about 1,000 metres. By sliding the ~~tuner~~ tuner to the left, the wave length will be increased, and Morse signal ~~from~~ from ships at sea and from land stations may be received.

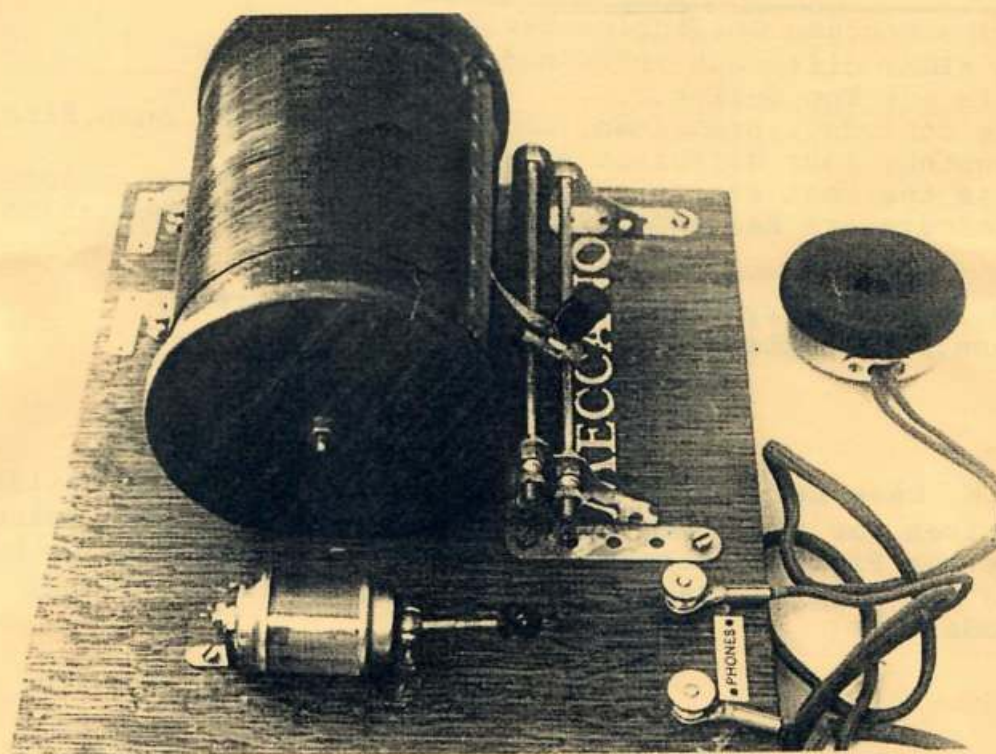
If the receiver is left connected to the lead-in wire when ~~not~~ in use the cat-whisker should be moved from the face of the crystal, as otherwise the latter may become "tired." When receiving is finished the ~~apparatus~~ apparatus should be disconnected from earth and lead-in wires, which should then be connected together so as to earth any influences picked up by the aerial.

If you ~~have~~ have any difficulty in regard to Radio, write to the Radio Editor of the *Meccano Magazine*, who will be pleased to help you.

MECCANO LIMITED

BINNS ROAD

LIVERPOOL



MECCANO

IT,S REALLY ECITING.....

THE LATEST RELEASES FROM MECCANO FRANCE.

THE NEW MECCANO COLLECTION SERIES Includes the new RED parts..

2920 The Areoplane Series, makes three different Aircraft.
121 parts,
2930 The Dune Buggy Series, makes three different Vehicals.
85 parts, includes four large rubber wheels.
2940 The Wind Glider Series, makes three different Land and
Aircraft. 99 parts, includes special wheels.
2950 The Motor Cycle and Side Car Series, makes three different
Motor Cycle Combinations, 107 parts, new wheels and tyres.

The above four Meccano Sets are available at \$25. each.

THE Meccano Kitset of the Month....

3910 The Meccano Collection Series.
Makes EIGHT different TRUCK models. 182 parts.
This is our Top Seller.....
Trucks include...Breakdown, Logging, Flat Deck, Dump, Fire,
and another four different Articulated units.
This is the most exciting Kit Set that I have seen sofar.
The Colours are Red and Zinc-silver , a smart combination

As an introductory Offer , \$41.50 , freight free..
You won,t do better than this.

F.W. Cave Ltd., have agreed to supply the Model Building
Prizes for the Model Building Section in Current Colours
at our Fielding Meccano Exhibition , Easter 1997, so now
is the time to start constructing your Prize winning
model.

Available From.....
Lindsay Bond Electronics,
Regan Street, STRATFORD.
Phone 06 765 5008.
A/H. 06 765 5665.