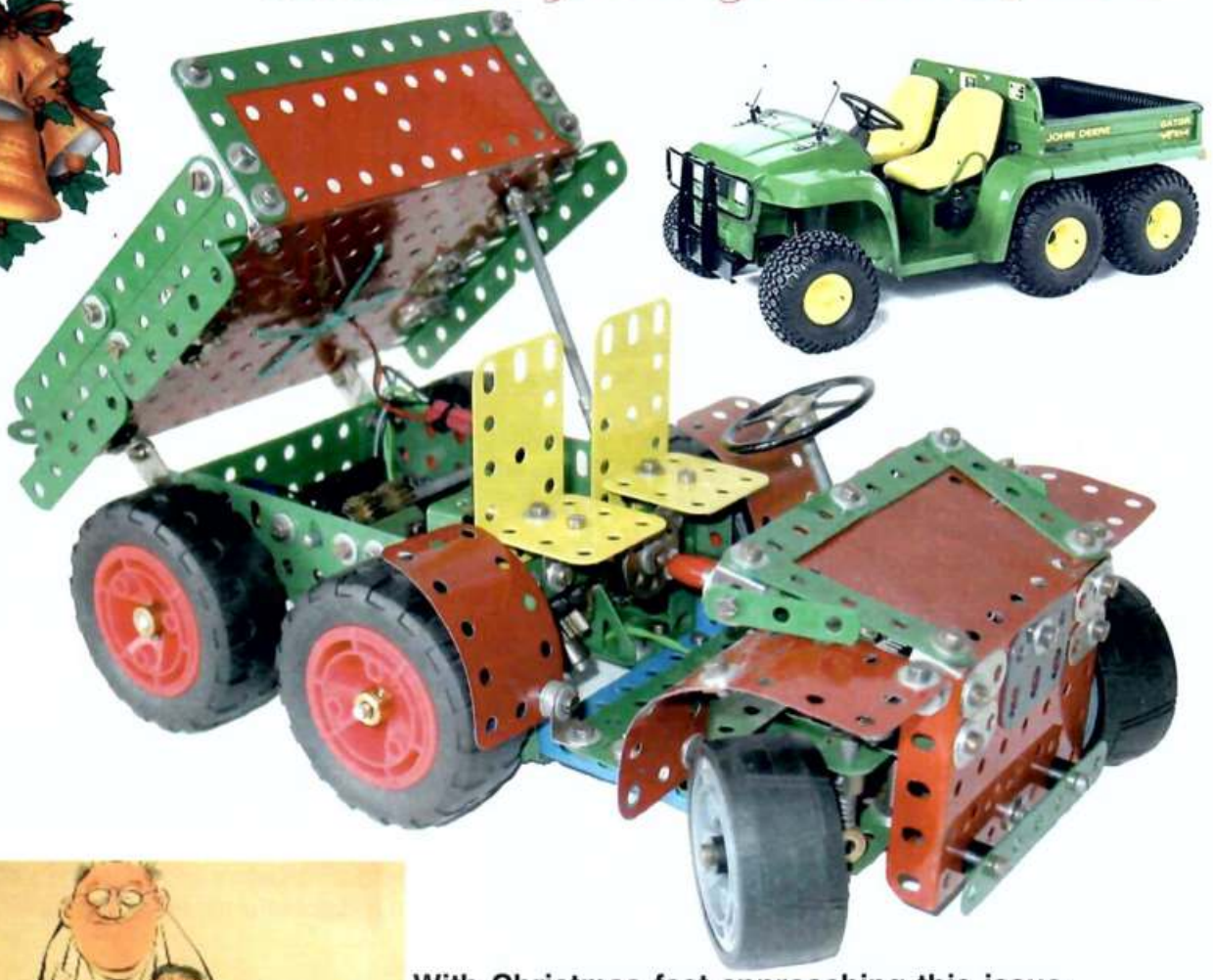
NZFMM MAGAZINE

Volume 30 No 6 December 2006

Christmas Greetings to our Readers



With Christmas fast approaching this issue has a few model building projects. Above is Bruce Geange's fine model of the Gator six wheeler. There are detailed illustrations of this model starting at page 3.

For those who would prefer something simpler, why not make one of these very practical wine pouring machines! We're not sure who the chaps are in the picture but they are obviously experts in model building.

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NZ Federation of Meccano Modellers Magazine

Editor: Bruce Neilson,
P O Box 1009,
Palmerston North 4440.
Phone: 06 355 0776
Email: <rbneilson@infogen.net.nz>

Compositor: John Ince,
5 Lennox Place, Feilding 4702
Phone: 06 323 7075
Email: <johnince@man.quik.co.nz>

Roving Reporter: Bob Prescott,
16 Watford Drive, Paraparaumu, Kapiti 5032.
Phone: 04 9052963
Email: <bobandanne@paradise.net.nz>

The NZFMM Magazine is published six times a year in February, April, June, August, October and December. The publisher is the NZ Federation of Meccano Modellers. The purpose of the magazine is to publish articles and photographs about Meccano and Meccano models, to report the meetings of New Zealand Meccano Clubs, to print letters expressing the views of Meccano modellers, to keep members informed of future events and to print advertisements of Meccano related things. The views expressed in the magazine are not necessarily those of the editor or of the Federation.

Letters are welcome and may be sent by post or by email. The author's name and address must be supplied. Publication of letters will be at the editor's discretion.

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Subscription Renewal

The 2007 - 2008 Subscription form will be enclosed with the Feb 2007 issue of NZFMM magazine
Ideal Christmas present

And a Scrooge Christmas to You

This is the December issue of the NZFMMM and you expect me to write platitudes of Christmas goodwill, friendship and presents?? Wrong!! We are going to explore the dark side of your nature and bring out feelings of destruction and danger. This action will take place on the day after Christmas when your stomach is puking from too much rich food, your head is thumping from alcohol poisoning, your soul is in depression from having to put up with 'the relatives' and your rotten children have no respect for the fortune you spent on presents that has gone on your overextended credit cards.
Yes, we are going to explore the trauma of TAKING MODELS TO PIECES! Grown men in Hawera have been known to blanch at the very thought of it. So now that you are in the post-Christmas foul mood, this is the time to bring out the dead models.
Firstly you will take up your screwdriver and separate nut from bolt and let the unsecured part fall onto the tablecloth. Sacrilege! That model took two years of your (and the family's) leisure time to build, cost scarce dollars for essential parts, and got you a reputation of eccentricity among your neighbours when they look at your overgrown section. But you do need the parts to start that Supermodel for the 2007 Convention. The hands go faster , the mood gets blacker, the pile of parts rises faster, and eventually the numb brain realises that the model is gone. Did you remember to photograph it??
Secondly, you have to sort all those parts into piles of the same sort ready for filing. Why do we start with the big parts first and leave the little nuts, bolts and washers to last?. Just for fun, count the number of bolts you used in that model.
Thirdly, wipe down each part lovingly with a soft cloth (white handkerchiefs are good) to remove old black oil and thick layers of dust. This can be done without thinking too hard.
Fourthly, get up off your derriere (bum to you) and walk back and forth between the piles of parts on the table and your storage arrangement and put away all those beautiful jewels of Meccano (and hide those non-standard and mutilated bits).
Congratulations! Bandage the blood on your hands, kick the cat, and call it a day. You have earned a rest.

From the editorial crew to all our contributors and consumers of the crafty content, Merry Christmas and a successful modelling New Year.

R. Bruce Neilson

Stop Press

NZFMM Convention 2007 Prize
Ashok Banerjee as Sponsor
Senior First Prize, NZ$500 in parts

Contents

John Deere 'Gator' 6 x 4 Utility Vehicle

designed and built by Bruce Geange
text and pictures by Bruce Neilson

Prototype –

See photograph. The unusual aspects of this vehicle are:-
Continuously variable transmission.
Has only forward, neutral and reverse gears.
Drive belt from motor.
Chain drive to rear axles.
Independent front suspension.
No rear suspension.
Rack and pinion steering.
Tipping tray.

Background.

The prototype was put up as a model challenge to members of MWT Meccano Club in June 2003 and two models were presented in October 2003. This model closely follows the features and layout of the prototype.

Notes

This modelplan was written up as the model was disassembled progressively, each module photographed and parts recorded. The write-up was then reversed to approximate the order of construction.
All the modelplan photographs should be studied before construction commences as some modules have additional angles showing elsewhere. A good idea is to enlarge each photo up to A4 by photocopying for visibility.
Washers have been used under all bolt heads but not included in the count of parts.
A CDRom of all the photographs in colour is available from the Editor of NZFMMM on request. (See page 2 of NZFMMM)

PS – This modelplan has taken 50 hours plus of work. Photos were taken in diffused natural light using a Canon G2 digital camera on a tripod. The Parts lists were compiled using an Excel spread sheet with Lookup tables.

In addition John Ince has spent another 20 hours or so setting up the modelplan in the magazine on his Macintosh G4 computer. Has it all been worthwhile?

We would like to know what you think. The NZFMM magazine has contained quite a few modelplans prepared in a variety of styles. Which ones did you like best? Comments would be especially welcome from those who have actually built the models. An email will do; be sure to give us your name.

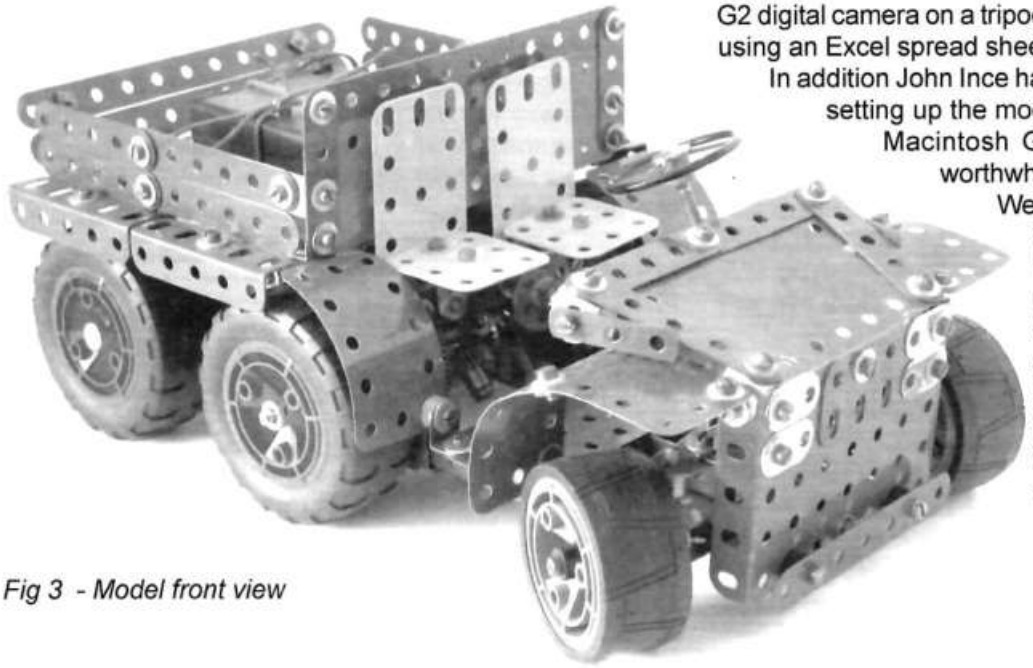


Fig 3 - Model front view

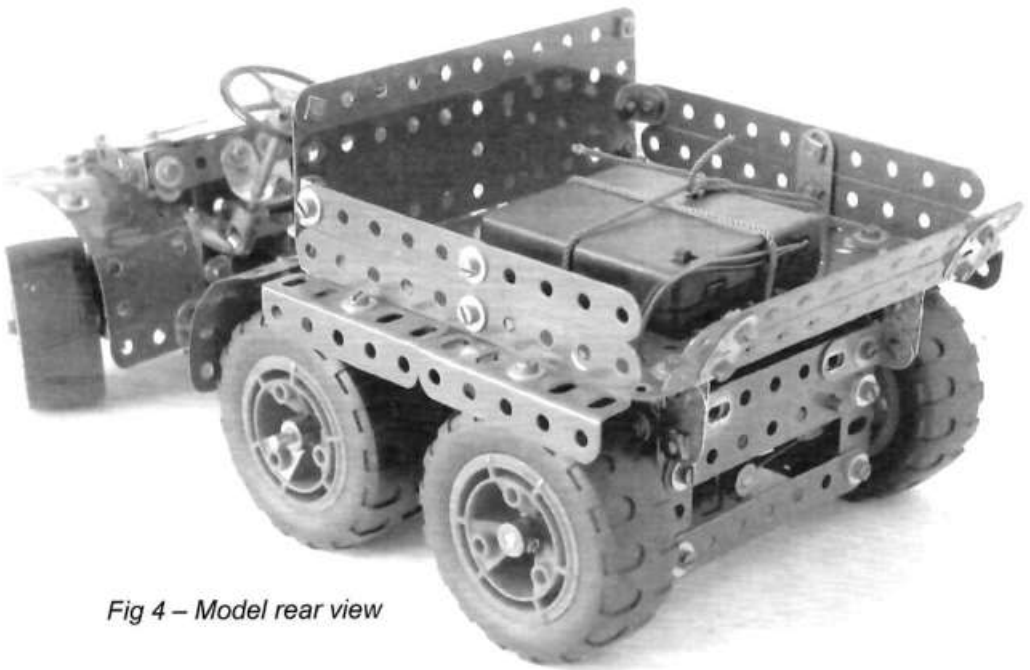
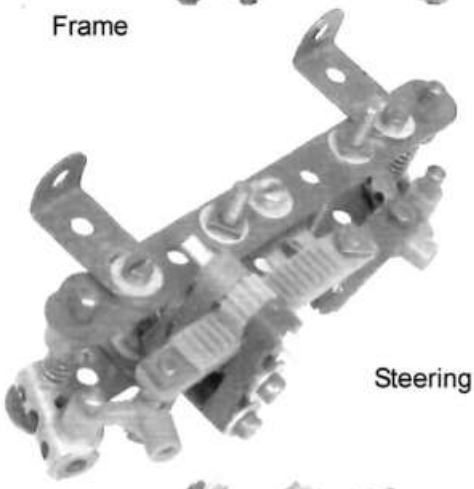


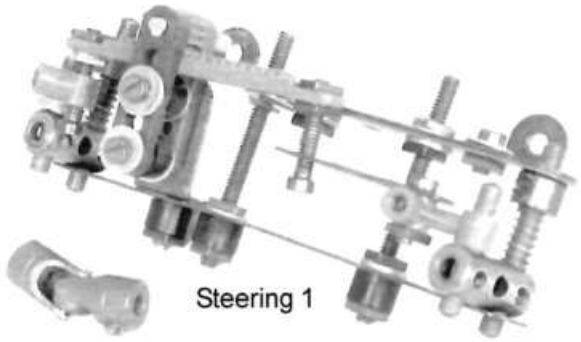
Fig 4 – Model rear view

Frame



Steering 1

Steering 1



Steering 1

Fig 5 - Steering

Frame

P/N 2a, Perforated Strip $4^1/_2$"	3
P/N 12a, Angle Bracket 1" x 1"	1
P/N 12b, Angle Bracket 1" x $^1/_2$"	2
P/N 10, Fishplate 1"	1
P/N 59, Collar	2
P/N 38a, Spacer Plastic Standard collar size	3
P/N 63, Coupling	2
P/N 81, Threaded Rod 2"	2
P/N 120b, Compression Spring $^9/_{16}$"	2
P/N 18b, Axle Rod 1"	2
P/N 18a, Axle Rod $1^1/_2$"	2
P/N 111c, Bolt $^3/_8$"	1
P/N 111a, Bolt $^1/_2$"	1

Steering 1

P/N 110g, Rack Strip Plastic 2"	1
P/N 260f, King Pin with hole plastic	2
P/N 260c, Strip 5 hole thick plastic $1^1/_2$" x $^1/_4$"	2
P/N 25b3p, Pinion plastic 3 Side Axle Rod 11T x $^1/_4$"	1
P/N 140, Universal Coupling	1

Note - The Universal Coupling used in the model is of Marklin origin and has tapered wings to allow a 90 degree turn each way when at right angles and when the steering wheel is turned. Modify the angle of the steering wheel column back to about 45 degrees to get the P/N 140 to operate.

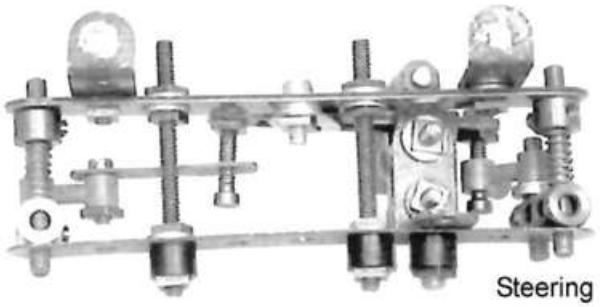
P/N 38a, Spacer Plastic Standard collar size	2
P/N 235g, Narrow Strip $1^1/_2$"	1
P/N 318c, Axle Rod 3 sided $1^1/_4$"	1
P/N 111c, Bolt $^3/_8$"	1
P/N 111, Bolt $^3/_4$"	2
P/N 111d, Bolt $1^1/_8$"	2

Radiator

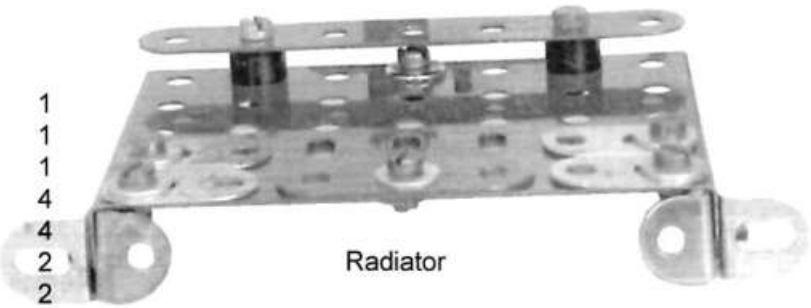
P/N 53, Flanged Plate $3^1/_2$" x $2^1/_2$"	1
P/N 3, Perforated Strip $3^1/_2$"	1
P/N 103h, Flat Girder $1^1/_2$"	1
P/N 12, Angle Bracket $^1/_2$" x $^1/_2$"	4
P/N 10, Fishplate 1"	4
P/N 38a, Spacer Plastic Standard collar size	2
P/N 111a, Bolt $^1/_2$"	2
P/N 37b, Bolt $^7/_{32}$"	8

Floor 2

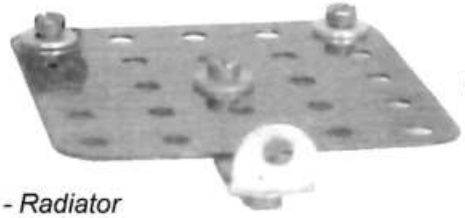
P/N 72, Flat Plate $2^1/_2$" x $2^1/_2$"	1
P/N 12, Angle Bracket $^1/_2$" x $^1/_2$"	1
P/N 5, Perforated Strip $2^1/_2$"	1
P/N 37b, Bolt $^7/_{32}$"	4



Steering 1



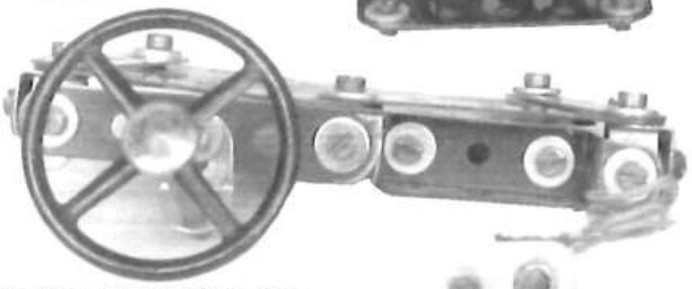
Radiator



Floor 2

Fig 6 - Radiator

Front Wheel



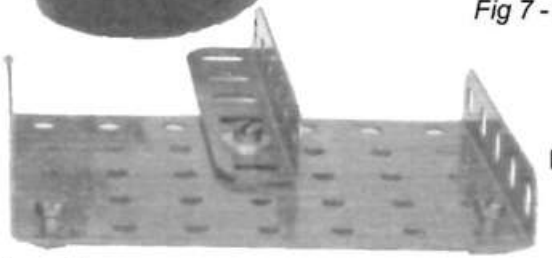
Dashboard and Glove box

Ignition Switch

Front Wheel

P/N 187c, Wheel Rim with 57T Internal Gear	2
P/N 142r, Tyre to fit 187c Thin	2
P/N 38a, Spacer Plastic Standard collar size	4
P/N 111d, Bolt $1^1/_8$"	2
P/N 37c, Nut	2

Fig 7 - Bonnet



Floor 1

Floor 1

P/N 53, Flanged Plate $3^1/_2$" x $2^1/_2$"	1
P/N 9c, Angle Girder 3"	1
P/N 38, Washer Standard	1
P/N 37b, Bolt $^7/_{32}$"	3

Bonnet

P/N 190a, Flexible Plate metal $3^1/_2$" x $2^1/_2$"	1
P/N 5, Perforated Strip $2^1/_2$"	4
P/N 235g, Narrow Strip $1^1/_2$"	2
P/N 12, Angle Bracket $^1/_2$" x $^1/_2$"	2
P/N 37b, Bolt ^{7}/32"	7

Ignition Switch

On Off Switch	1
Insulated Fish plate (home made)	1

Steering

P/N 185, Steering Wheel $1^3/_4$"	1
P/N 17, Axle Rod 2"	1

Dashboard

P/N 5, Perforated Strip $2^1/_2$"	1
P/N 12c, Angle Bracket Obtuse $^1/_2$" x $^1/_2$"	1
P/N 12, Angle Bracket $^1/_2$" x $^1/_2$"	1
P/N 37b, Bolt $^7/_{32}$"	3
P/N 812b, Narrow Angle Bracket $^1/_2$" x 1" slotted hole	1 Extended

Glove box

P/N 9f, Angle Girder $1^1/_2$"	1
P/N 125, Reversed Angle Bracket $^1/_2$" x $^1/_2$" x $^1/_2$"	1
P/N 812b, Narrow Angle Bracket $^1/_2$" x 1" slotted hole	1 Extended
P/N 12, Angle Bracket $^1/_2$" x $^1/_2$"	1
P/N 37b, Bolt 7/32"	3

Mudguard Module

P/N 188, Flexible Plate metal $2^1/_2$" x $1^1/_2$"	6
P/N 2a, Perforated Strip $4^1/_2$"	2
P/N 5, Perforated Strip $2^1/_2$"	2
P/N 9f, Angle Girder $1^1/_2$"	2
P/N 12, Angle Bracket $^1/_2$" x $^1/_2$"	4
P/N 38, Washer Standard	8
P/N 111c, Bolt $^3/_8$"	2
P/N 37b, Bolt $^7/_{32}$"	14

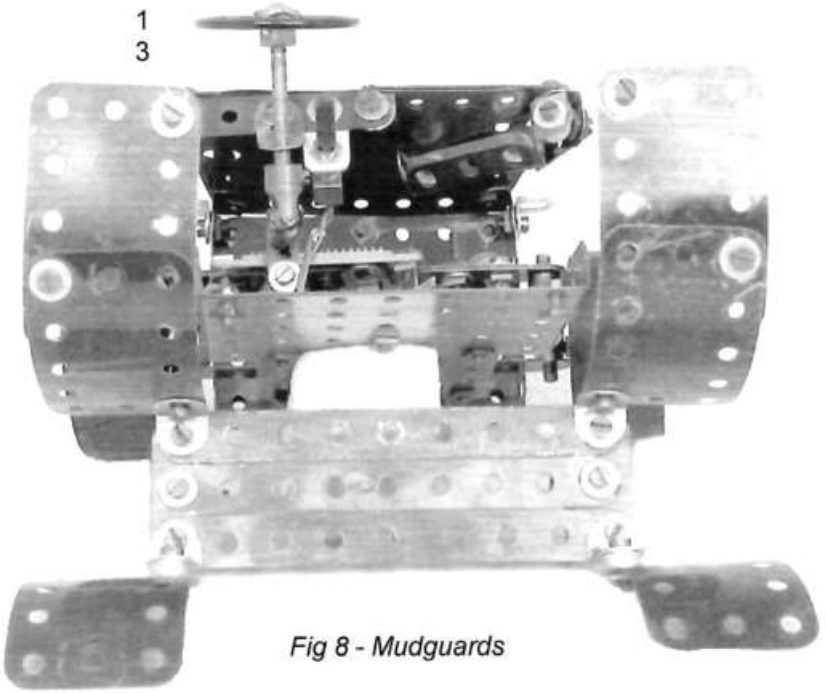


Fig 8 - Mudguards

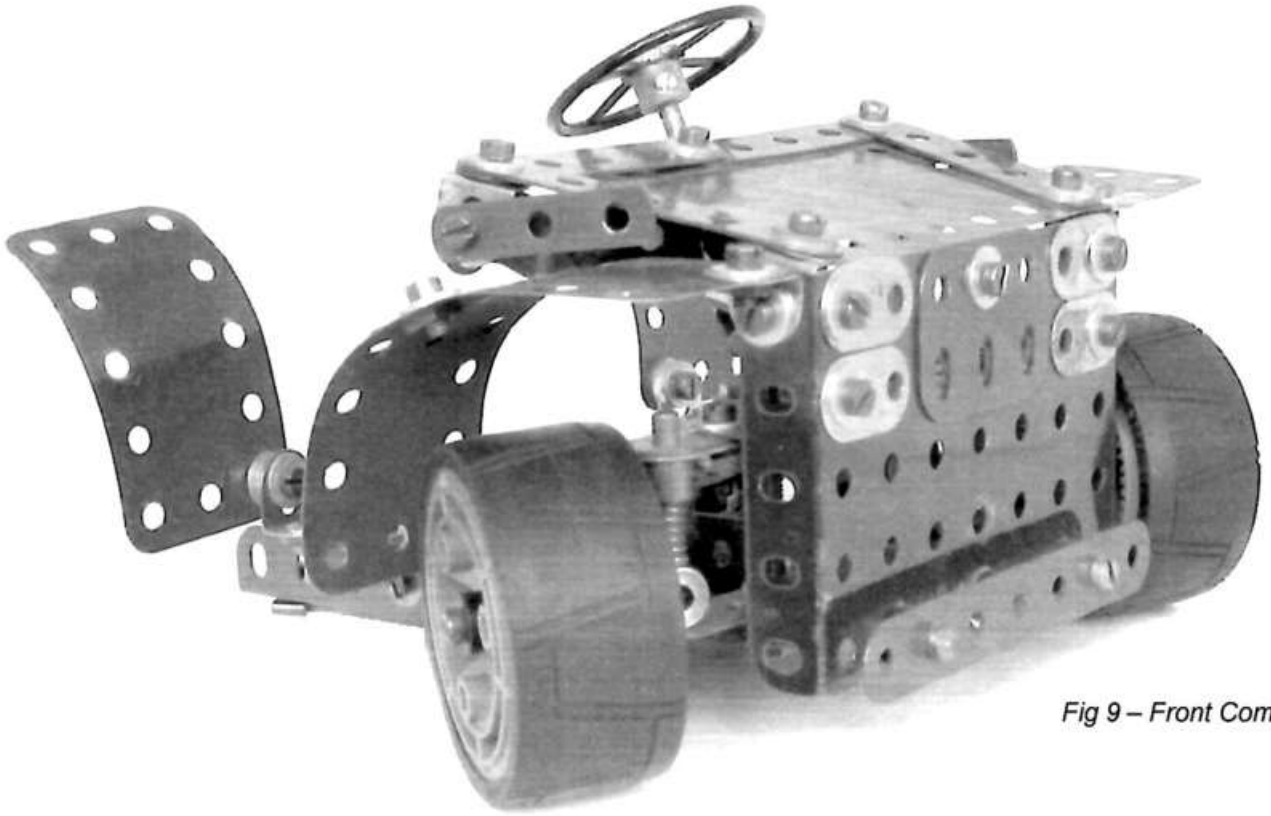


Fig 9 – Front Complete

Chassis Right Outside

P/N 103, Flat Girder $5^1/_2$"	2
P/N 9, Angle Girder $5^1/_2$"	1
P/N 9e, Angle Girder 2"	2
P/N 6a, Perforated Strip $1^1/_2$"	1
P/N 62b , Double Arm Crank	1
P/N 62, Crank	1
P/N 37b, Bolt $^7/_{32}$"	10

Cross members

P/N 3, Perforated Strip $3^1/_2$"	2
P/N 37b, Bolt $^7/_{32}$"	4

Chassis Left Inside

P/N 103, Flat Girder $5^1/_2$"	2
P/N 9, Angle Girder $5^1/_2$"	1
P/N 9e, Angle Girder 2"	2
P/N 6a, Perforated Strip $1^1/_2$"	1
P/N 62b, Double Arm Crank	1
P/N 62, Crank	1
P/N 126, Trunnion	1
P/N 103h, Flat Girder $1^1/_2$"	1
P/N 37b, Bolt $^7/_{32}$"	16

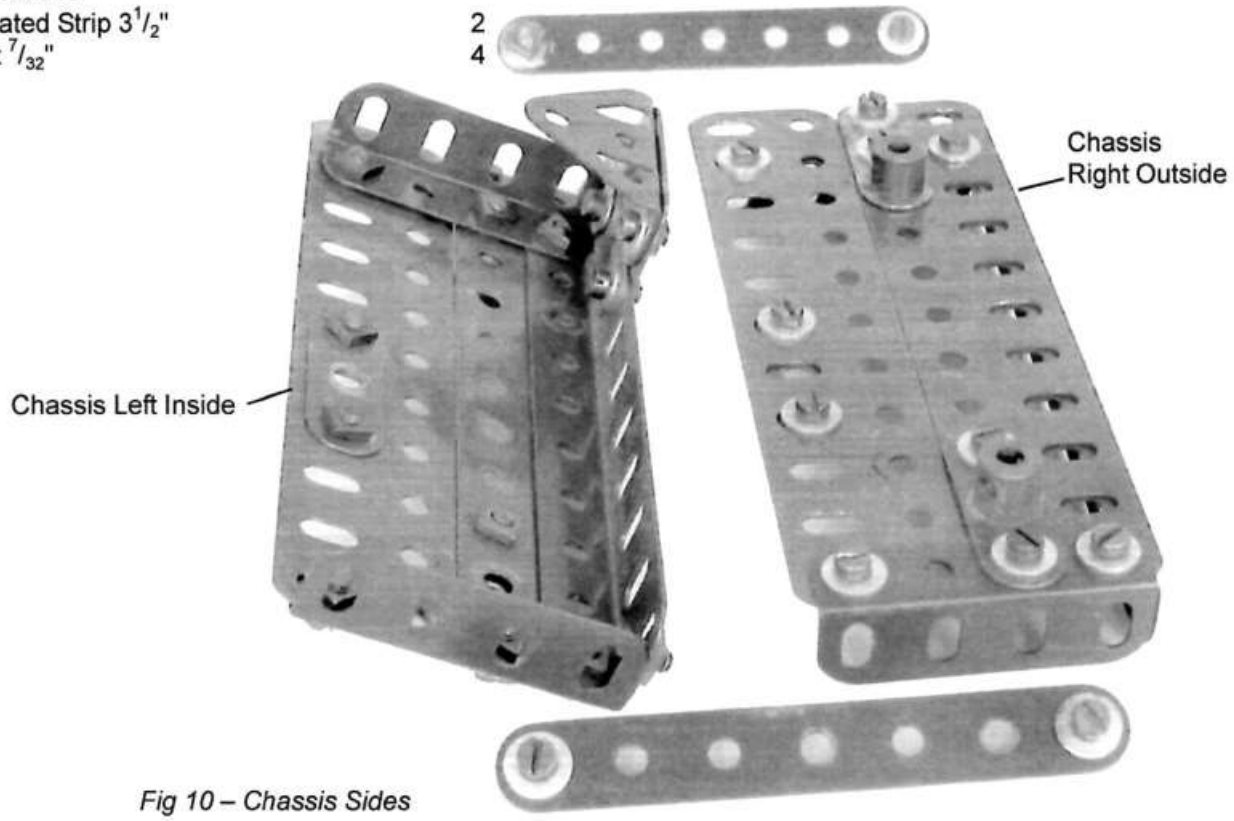


Fig 10 – Chassis Sides

Back Wheel 2nd Drive

P/N 317, Axle Rod 3 sided 2"	2
P/N 96a, Sprocket Wheel 14T x $^3/_4$"	2 tight
P/N 94, Sprocket Chain 55 links	2

Differential & Back Wheel 1st Drive

P/N 316, Axle Rod 3 sided 3$^1/_2$"	1
P/N 96a, Sprocket Wheel 14T x $^3/_4$"	1 tight
P/N 29, Contrate wheel 25T x $^3/_4$"	1 tight
P/N 96a, Sprocket Wheel 14T x $^3/_4$"	1 tight
P/N 316b, Axle Rod 3 sided 3"	1
P/N 27a, Gear wheel 57T x 1$^1/_2$"	1 bolted by
P/N 82, Threaded Rod 1"	2 by tight
P/N 37c, Nut	6 to
P/N 59, Collar	2 tight with
P/N 29, Contrate wheel 25T x $^3/_4$"	1 tight
P/N 63, Coupling	1
P/N 18a, Axle Rod 1$^1/_2$"	1
P/N 69a, Grub Screw $^5/_{32}$" Standard	2
P/N 147b, Pivot Bolt 3/8" plain, 1/4" threaded (Substitute P/N 147d if necessary)	2 tight hold
P/N 25, Pinion 25T x $^3/_4$" x $^1/_4$"	2 loose

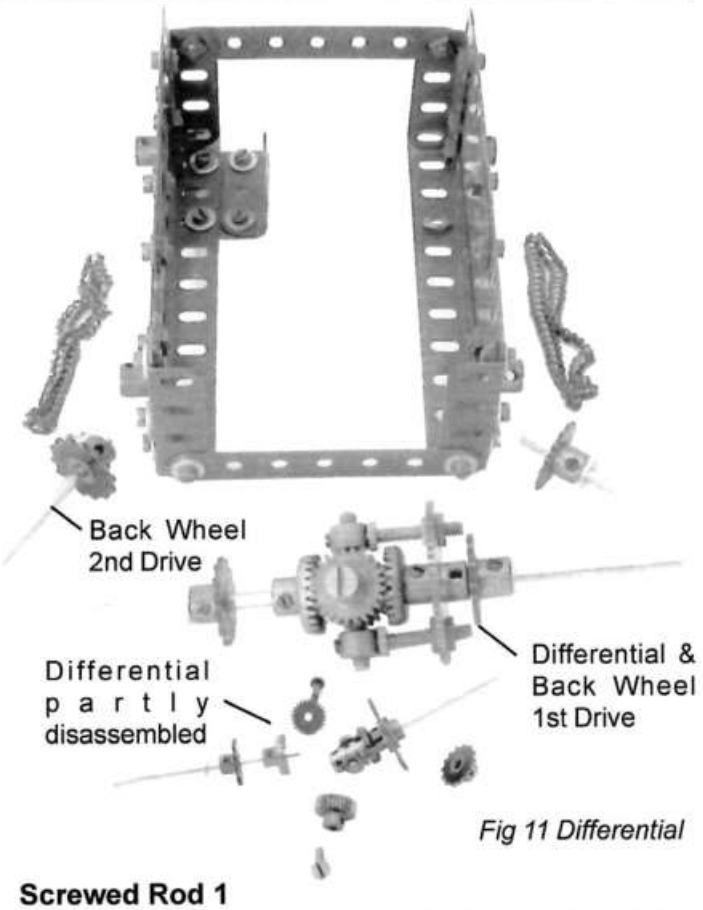


Fig 11 Differential

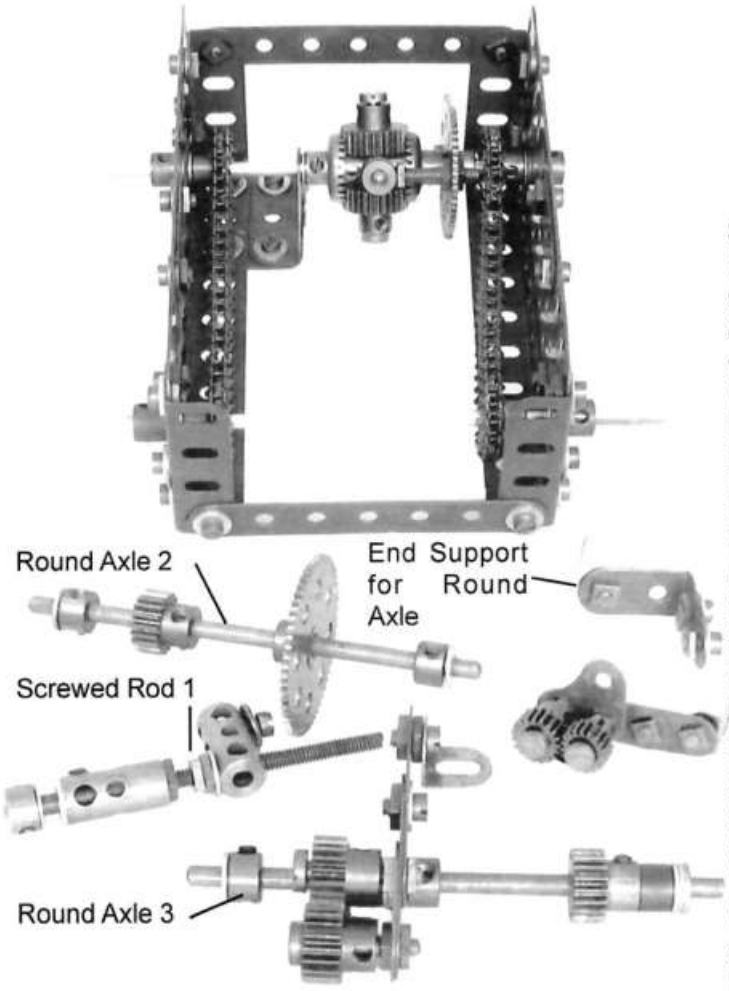


Fig 12 – Forward / Reverse Gear

Round Axle 2

P/N 15b, Axle Rod 4"	1
P/N 26, Pinion 19T x $^1/_2$" x $^1/_4$"	1
P/N 59, Collar	2
P/N 69a, Grub Screw $^5/_{32}$" Standard	4
P/N 27a, Gear wheel 57T x 1$^1/_2$"	1 fixed

End Support for Round Axle

P/N 12a , Angle Bracket 1" x 1"	1
P/N 10, Fishplate 1"	1
P/N 37b, Bolt $^7/_{32}$"	3

Screwed Rod 1

Note - This is the tricky part to adjust correctly. P/N 63, Coupling is bolted the Chassis frame and the winding in and out of P/N 81 pulls Pinion 8 and 9 alternately in and out of contact with Pinion 7 to give forward or reverse gear (same principle as in a No 1 Clockwork motor).

P/N 63, Coupling	1
P/N 63c, Threaded Coupling	1
P/N 81, Threaded Rod 2"	1
P/N 18b, Axle Rod 1"	1
P/N 37c, Nut locknutted	2
P/N 59, Collar	1
P/N 69a, Grub Screw $^5/_{32}$" Standard	1
P/N 37b, Bolt $^7/_{32}$"	1
P/N 37c, Nut	1 tight

Round Axle 3

P/N 15b, Axle Rod 4"	1
P/N 59, Collar	2
P/N 38a, Spacer Plastic Standard collar size	1
P/N 38, Washer Standard	4
P/N 26, Pinion 19T x $^1/_2$" x $^1/_4$"	2 tight

Note - Loose on Round Axle 3 is the reversing gear made up of Pinion 8 in constant mesh with Pinion 9 and 10 and sometimes with Pinion 7. Pinion 9 is in constant mesh with Pinion 8 and sometimes with Pinion 7. This module is shown in detail as "Repeat of part of Round Axle 3"

P/N 26, Pinion 19T x $^1/_2$" x $^1/_4$"	2 loose on
P/N 147b, Pivot Bolt $^1/_2$" plain $^1/_4$" threaded (Substitute P/N 147f if necessary)	2
locknutted by P/N 37c, Nut	4
P/N 12, Angle Bracket $^1/_2$" x $^1/_2$"	1 loose on
P/N 37b, Bolt $^7/_{32}$"	1 held by two
P/N 37c, Nut	2
P/N 6a, Perforated Strip 1$^1/_2$"	2
P/N 133a Corner Bracket 1"	1

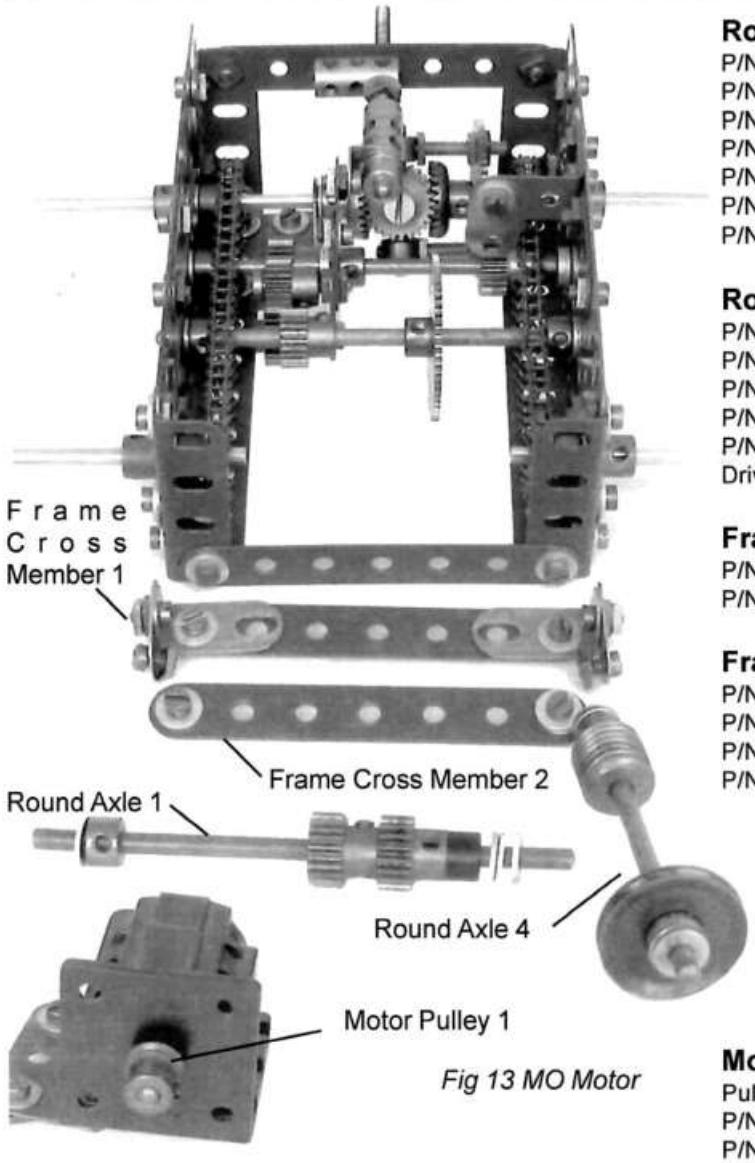


Fig 13 MO Motor

Round Axle 1

P/N 15b, Axle Rod 4"	1
P/N 38, Washer Standard	4
P/N 38a, Spacer Plastic Standard collar size	1
P/N 59, Collar	1 fixed
P/N 69c, Grub Screw $^{7}/_{64}$"	2
P/N 26, Pinion 19T x $^{1}/_{2}$" x $^{1}/_{4}$"	2 fixed
P/N 69a, Grub Screw $^{5}/_{32}$" Standard	1

Round Axle 4

P/N 16, Axle Rod 3$^{1}/_{2}$"	1
P/N 22, Pulley with Boss 1"	1
P/N 38, Washer Standard	6
P/N 32, Worm $^{1}/_{2}$" x Right Hand	1
P/N 69a, Grub Screw $^{5}/_{32}$" Standard	2
Driving Band from P/N 22 Pulley to Motor	

Frame Cross Member 1

P/N 3 , Perforated Strip 3 $^{1}/_{2}$"	1
P/N 37b, Bolt 7/32"	2

Frame Cross Member 2

P/N 3, Perforated Strip 3$^{1}/_{2}$"	1
P/N 12b, Angle Bracket 1" x $^{1}/_{2}$"	2
P/N 10, Fishplate 1"	2
P/N 37b, Bolt $^{7}/_{32}$"	6

Motor

Pulley $^{5}/_{16}$" diam	1 fixed
P/N 69a, Grub Screw $^{5}/_{32}$" Standard	1
P/N 700, MO Motor Mk. 2	1
P/N 103h, Flat Girder 1$^{1}/_{2}$"	1
P/N 37b, Bolt $^{7}/_{32}$"	4

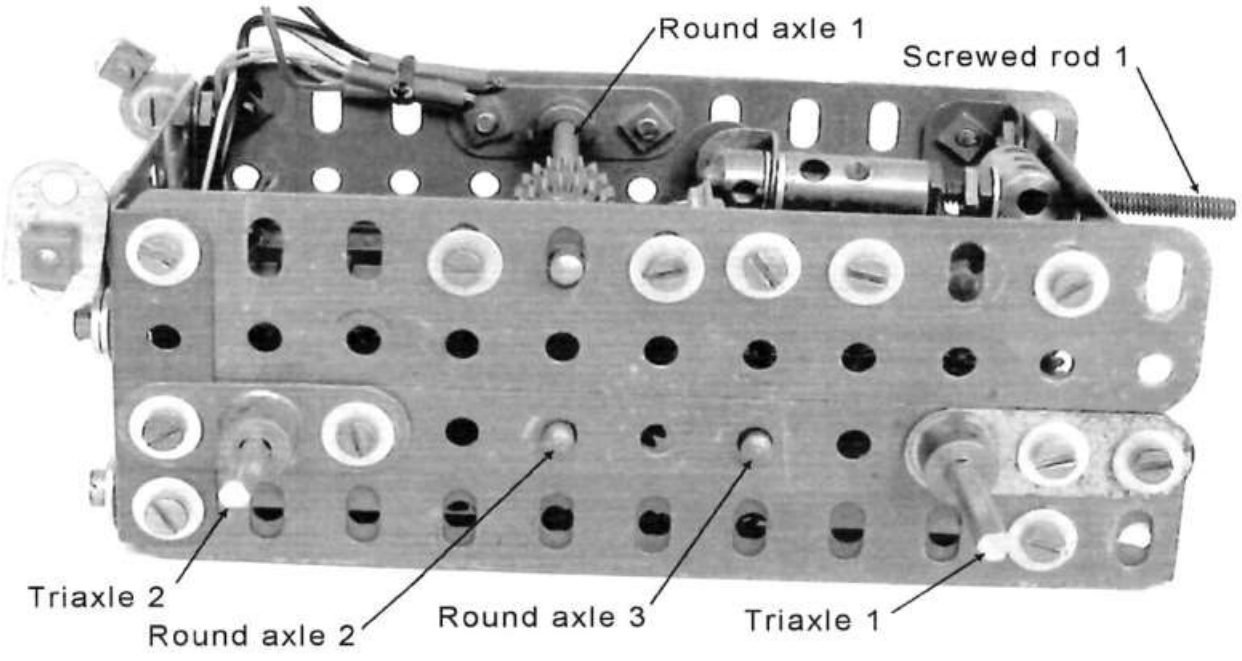


Fig 14 – Side View of Chassis

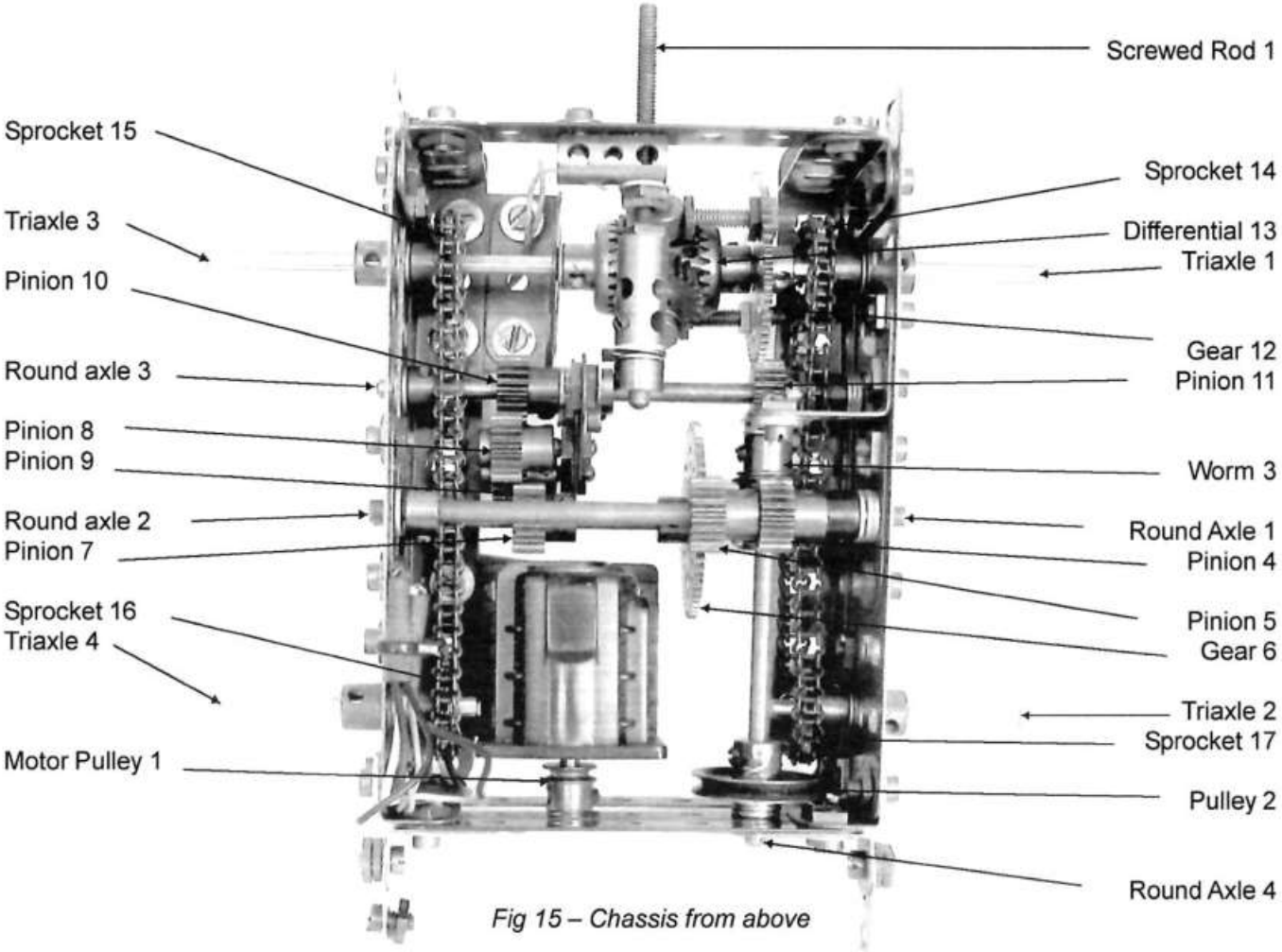


Fig 15 – Chassis from above

Note – The order of movement is Motor Pulley 1 to Pulley 2 (Driving Band not shown) to Worm 3 to Pinion 4 to Pinion 5 to Gear 6 to Pinion 7 to either Pinion 8 or Pinion 9 to Pinion 10 to Pinion 11 to Gear 12 to Differential 13 to Sprocket 14 and Sprocket 15 to Sprocket 16 and Sprocket 17

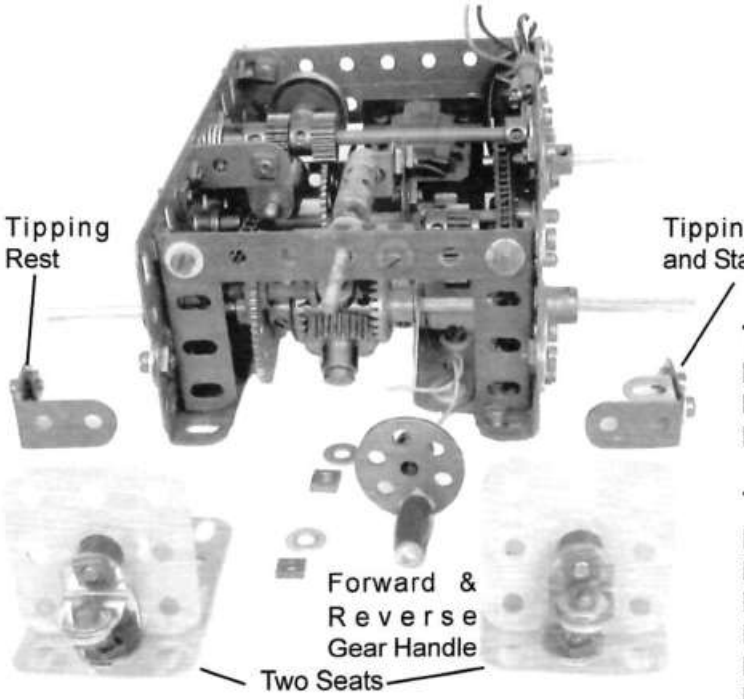


Fig 16 - Seats

Forward & Reverse Gear Handle

P/N 37c, Nut	4
P/N 38, Washer Standard	2
P/N 518, Bush Wheel 1" 6 Hole	1
P/N 147g, Pivot Bolt 1"	1
Erinoid grip from 19g Crank Handle	

Tipping Rest

P/N 12a, Angle Bracket 1" x 1"	1
P/N 37b, Bolt $^{7}/_{32}$"	1

Tipping Rest and Stay Base

P/N 12a, Angle Bracket 1" x 1"	1
P/N 37b, Bolt $^{7}/_{32}$"	2
P/N 12, Angle Bracket $^{1}/_{2}$" x $^{1}/_{2}$"	1

Two Seats

P/N 38, Washer Standard	4
P/N 74, Flat Plate $1^{1}/_{2}$" x $1^{1}/_{2}$"	2
P/N 188, Flexible Plate metal $2^{1}/_{2}$" x $1^{1}/_{2}$"	2
P/N 12, Angle Bracket $^{1}/_{2}$" x $^{1}/_{2}$"	4
P/N 38a, Spacer Plastic Standard collar size	2
P/N 37b, Bolt $^{7}/_{32}$"	6
P/N 111c, Bolt $^{3}/_{8}$"	2

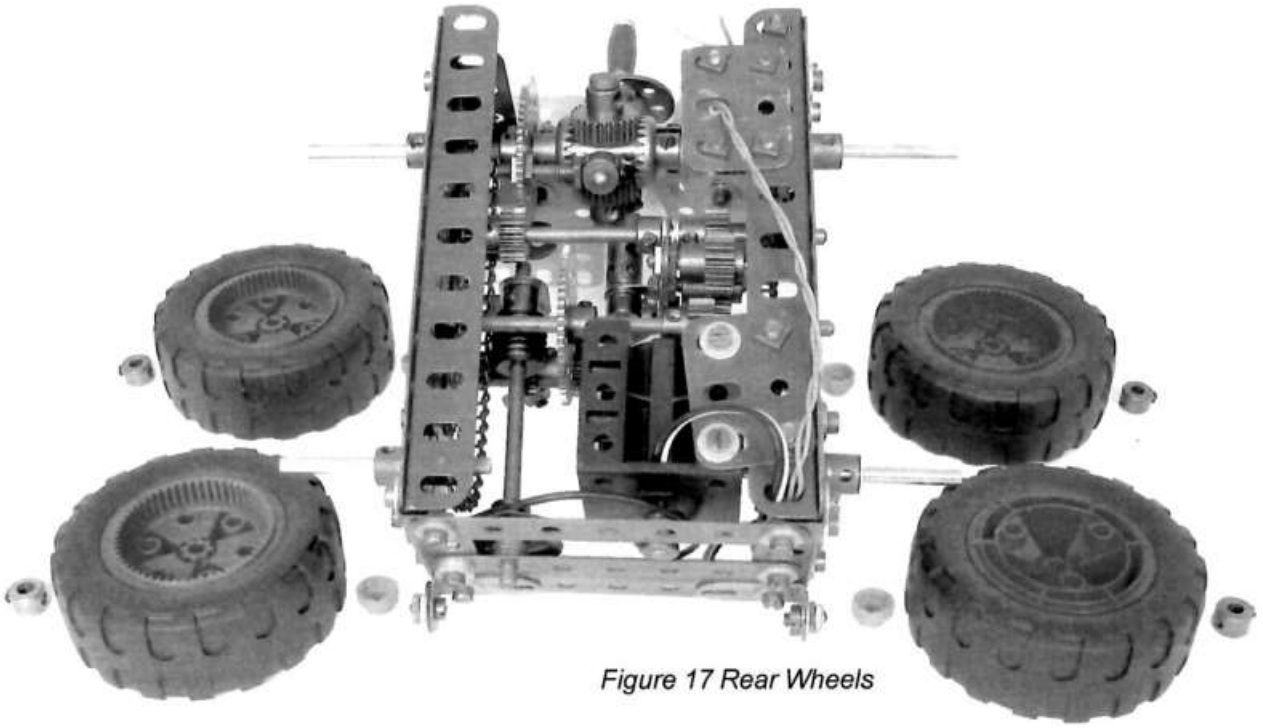


Figure 17 Rear Wheels

Four Wheels

P/N 187c, Wheel Rim with 57T Internal Gear	4
P/N 144c, Drive for 3 sided Axle rod Plastic	4
P/N 59, Collar	4 Tight
P/N 69a, Grub Screw $^{5}/_{32}$" Standard	4
A045, Tyre for 187c fat	4

Tipping Tray Stay

P/N 212, Rod & Strip Connector Straight	1 loose on
111c	
P/N 16, Axle Rod $3^{1}/_{2}$"	1
P/N 111c, Bolt $^{3}/_{8}$"	1 locknutted
P/N 37c, Nut	2
P/N 5, Collar	1 tight
P/N 69a, Grub Screw $^{5}/_{32}$" Standard	1

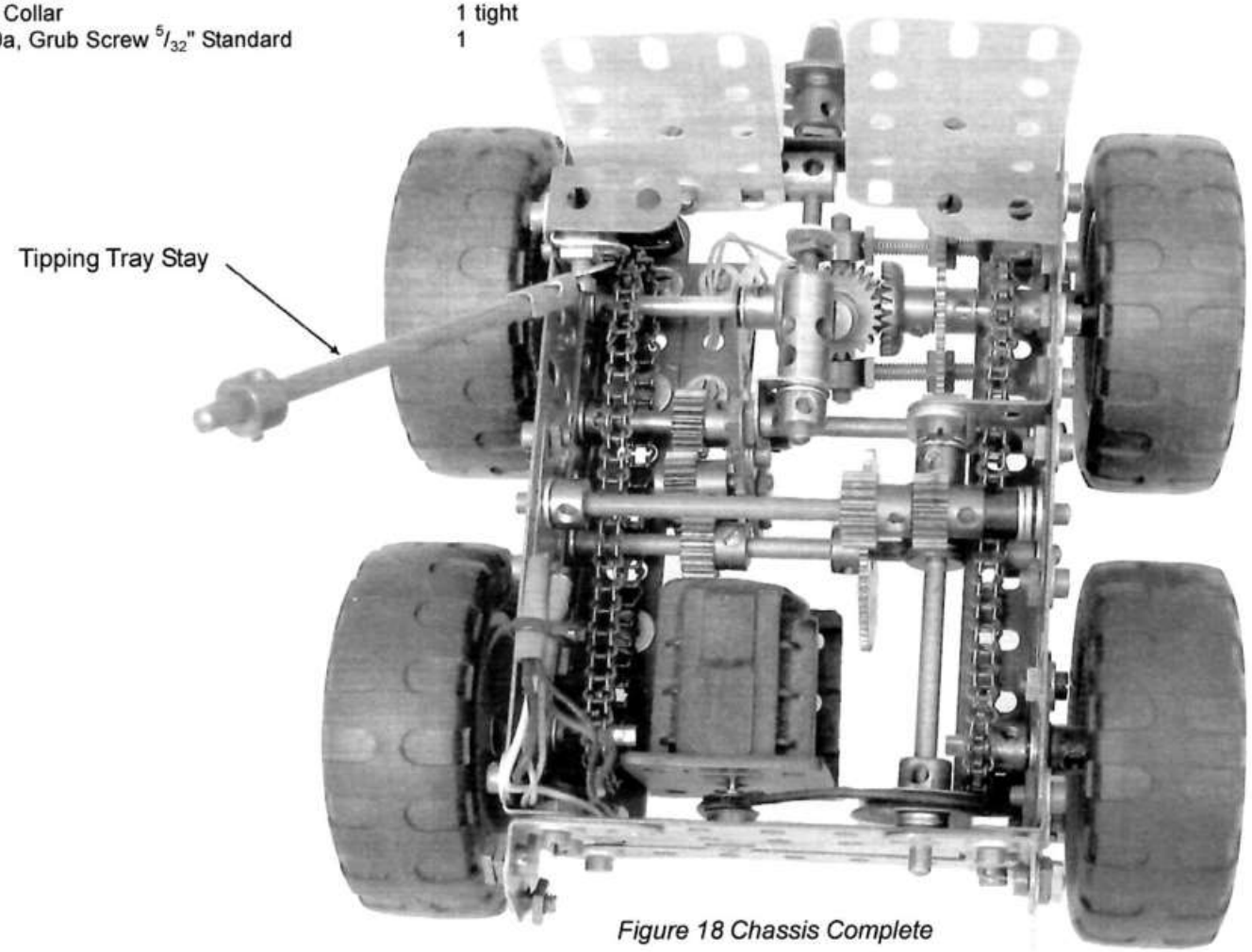


Figure 18 Chassis Complete

Tray Back

P/N 2, Perforated Strip $5^1/_2$"	2
P/N 114, Hinge	2
P/N 12, Angle Bracket $^1/_2$" x $^1/_2$"	2
P/N 10, Fishplate 1"	2
P/N 37b, Bolt $^7/_{32}$"	8

Tray Right Side

P/N 4, Perforated Strip 3"	2
P/N 5, Perforated Strip $2^1/_2$"	2
P/N 12b, Angle Bracket 1" x $^1/_2$"	1
P/N 12, Angle Bracket $^1/_2$" x $^1/_2$"	1
P/N 37b, Bolt $^7/_{32}$"	5

Tray Left Side

P/N 4, Perforated Strip 3"	2
P/N 5, Perforated Strip $2^1/_2$"	2
P/N 12b, Angle Bracket 1" x $^1/_2$"	1
P/N 12, Angle Bracket $^1/_2$" x $^1/_2$"	1
P/N 37b, Bolt $^7/_{32}$"	5

Tray Front

P/N 2, Perforated Strip $5^1/_2$"	1
P/N 189, Flexible Plate metal $5^1/_2$" x $1^1/_2$"	1
P/N 6, Perforated Strip 2"	2
P/N 12, Angle Bracket $^1/_2$" x $^1/_2$"	2
P/N 37b, Bolt $^7/_{32}$"	6

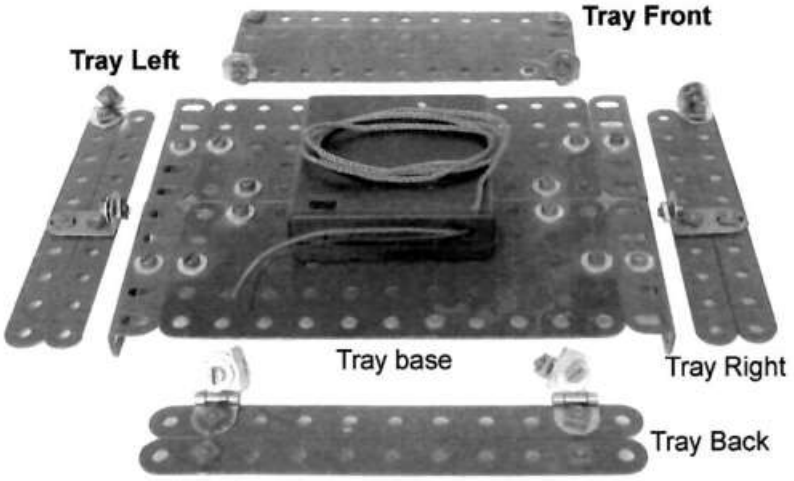


Fig 19 Tray Modules

Tray base

Bolt heads show position of P/N 10, Fishplate

P/N 9d, Angle Girder $2^1/_2$"	4
P/N 10, Fishplate 1"	6
P/N 37b, Bolt $^7/_{32}$"	12
P/N 70, Flat Plate $5^1/_2$" x $2^1/_2$"	2

Battery Box with four AA batteries
Cord to tie down Battery Box

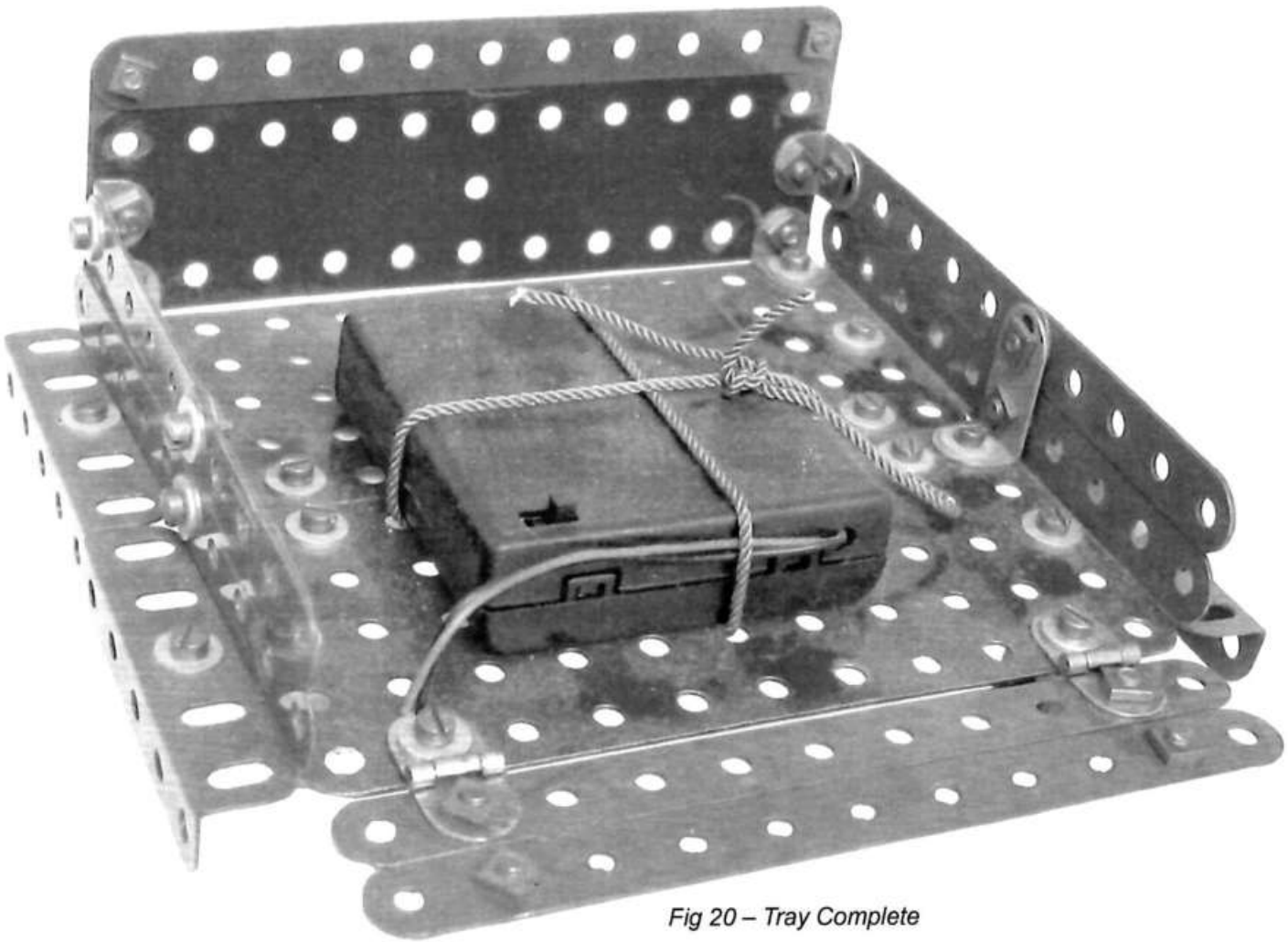


Fig 20 – Tray Complete

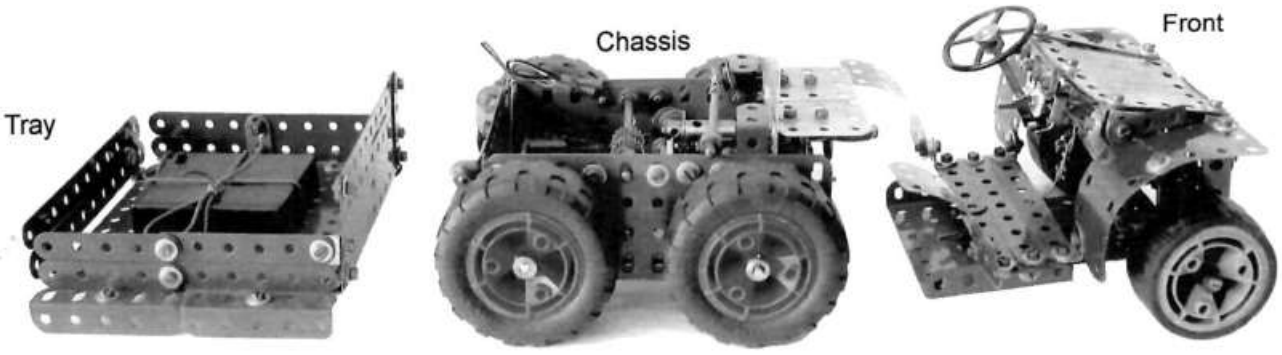


Fig 21 The Three Sections

Part List

P/N	Description	Size	Qty
2	Perforated Strip	5 1/2"	3
2a	Perforated Strip	4 1/2"	5
3	Perforated Strip	3 1/2"	5
4	Perforated Strip	3"	4
5	Perforated Strip	2 1/2"	12
6	Perforated Strip	2"	2
6a	Perforated Strip	1 1/2"	4
9	Angle Girder	5 1/2"	2
9c	Angle Girder	3"	1
9d	Angle Girder	2 1/2"	4
9e	Angle Girder	2"	4
9f	Angle Girder	1 1/2"	3
10	Fishplate	1"	16
12	Angle Bracket	1/2" x 1/2"	25
12a	Angle Bracket	1" x 1"	4
12b	Angle Bracket	1" x 1/2"	6
12c	Angle Bracket, Obtuse	1/2" x 1/2"	1
15b	Axle Rod	4"	3
16	Axle Rod	3 1/2"	2
17	Axle Rod	2"	1
18a	Axle Rod	1 1/2"	3
18b	Axle Rod	1"	3
22	Pulley with Boss	1"	1
25	Pinion	25T x 3/4" x 1/4"	2
25b3p	Pinion, plastic to fit 3 Sided Axle Rod	11T x 1/4"	1
26	Pinion	9T x 1/2" x 1/4"	7
27a	Gear wheel	57T x 1 1/2"	2
29	Contrate wheel	25T x 3/4"	2
32	Worm, right hand	1/4"	1
37c	Nut		23 plus
37b	Bolt		134
38	Washer Standard		9 plus
38a	Plastic Spacer, Standard collar size		15
53	Flanged Plate	3 1/2" x 2 1/2"	2
59	Collar		15
62	Crank		2
62b	Double Arm Crank		2
63	Coupling		4
63c	Threaded Coupling		1
69a	Grub Screw, standard		14 plus
69c	Grub Screw, short		2
70	Flat Plate	5 1/2" x 2 1/2"	2
72	Flat Plate	2 1/2" x 2 1/2"	1
74	Flat Plate	1 1/2" x 1 1/2"	2
81	Threaded Rod	2"	3
82	Threaded Rod	1"	2
94	Sprocket Chain	55 links	2
96a	Sprocket Wheel	14T x 3/4"	4
103	Flat Girder	5 1/2"	4
103h	Flat Girder	1 1/2"	3
110g	Rack Strip Plastic	2"	1
111	Bolt	3/4"	2
111a	Bolt	1/2"	3
111c	Bolt	3/8"	7
111d	Bolt	1 1/8"	4
114	Hinge		2
120b	Compression Spring	9/16"	2
125	Reversed Angle Bracket	1/2" x 1/2" x 1/2"	1
126	Trunnion		1
133a	Corner Bracket	1"	1

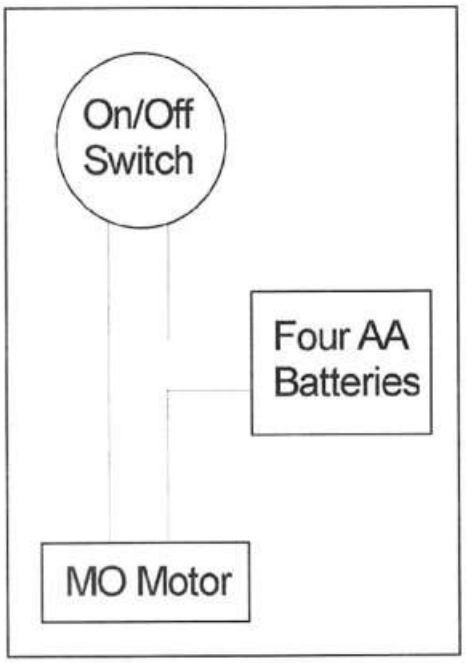


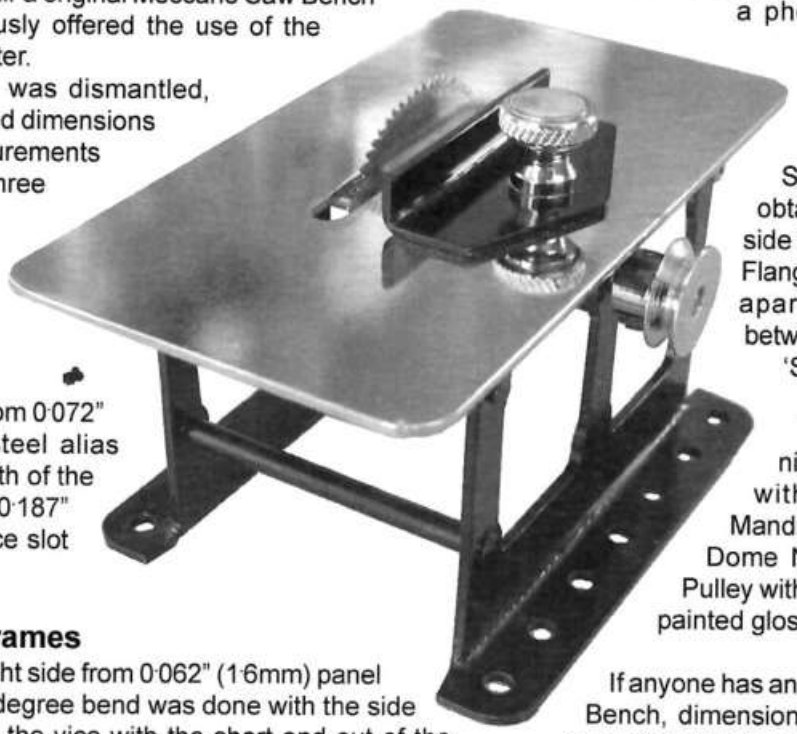
Fig 22 Wiring Diagram

P/N	Description	Size	Qty
140	Universal Coupling		1
142r	Tyre for 187c thin		2
A045	Tyre for 187c fat		4
144c	Drive for 3 sided Axle rod Plastic		4
147b	Pivot Bolt 3/4" plain, 1/4" threaded (Substitute 147d if ne8cessary)	1 5/8"	2
147b	Pivot Bolt 1/2" plain 1/4" threaded (Substitute 147f if necessary)	1 3/4"	2
147g	Pivot Bolt	1"	1
185	Steering Wheel	1 3/4"	1
187c	Wheel Rim with 57T Internal Gear		6
188	Flexible Plate metal	2 1/2" x 1 1/2"	8
189	Flexible Plate metal	5 1/2"x 1 1/2"	1
190a	Flexible Plate metal	3 1/2" x 2 1/2"	1
212	Rod & Strip Connector Straight		1
235g	Narrow Strip	1 1/2"	3
260c	Strip 5 hole thick plastic	1 1/2" x 1/4"	2
260f	King Pin with Hole plastic		2
316	Axle Rod, 3 sided	3 1/2"	1
316b	Axle Rod, 3 sided	3"	1
317	Axle Rod, 3 sided	2"	2
318c	Axle Rod, 3 sided	1 1/4"	1
518	Bush Wheel, 6 Hole	1"	1
700	MO Motor Mk. 2		1
812b	Narrow Angle Bracket	1/2" x 1"	2
On Off Switch			
Insulated Fish plate			
Driving Band from P/N 22 Pulley to Motor			
Pulley 5/16" diam			
Erinoid grip from P/N 19g, Crank Handle with Grip			
Battery Box with four AA batteries			
Cord to tie down Battery Box			

Meccano Saw Bench
Building a true replica

by Bruce Geange

I have had an incomplete set of measurements of the Meccano Saw Bench for a number of years. Recently I was asked to repair a original Meccano Saw Bench and was generously offered the use of the original as a master.
The Saw Bench was dismantled, drawings done and dimensions added. All measurements are in inches to three decimal places.
Do not scale from the drawings.



Saw Table

This was made from 0·072" (1·8mm) panel steel alias Zinc Tec. The width of the saw blade slot is 0·187" wide and the fence slot is 0·156" wide.

Saw Bench Frames

Make a left and right side from 0·062" (1·6mm) panel steel. The ninety degree bend was done with the side frame clamped in the vice with the short end out of the vice. This was bent over with an aluminium hammer and a square section of steel. The cut-out pieces in the frames were done with a Dremel tool carrying a 0·6mm cut-off wheel (several). Finish off with files.

Table Hinge Assembly

These can be made from 0·078" (2mm) steel. I made mine in two parts, the main body with a slot for the 8 BA thread to fit in. A 8 BA machine screw was cut to length and the two parts were Easy-flowed (silver solder) together. The shoulder bolt is a plain turning and threading job.

Saw Blade Mandrel, Washer, and Nut

All these are made from brass and are plain turning and threading jobs. The nut can have a taper at one end of the thread to allow the nut to run the length of the thread.

Fence and Nut

The nut is a plain turning job and made from brass. The fence is 0·062" (1·6mm) panel steel. The bolt required is 0·437" long and has a flat on one side 0·312" long. A washer is also required. The washer should have a flat across it to match the bolt.

Saw Spindle and Dome Nut

These again are easy tasks. The saw spindle is made from a Mecano axle and the dome nut is brass.

Saw Blade

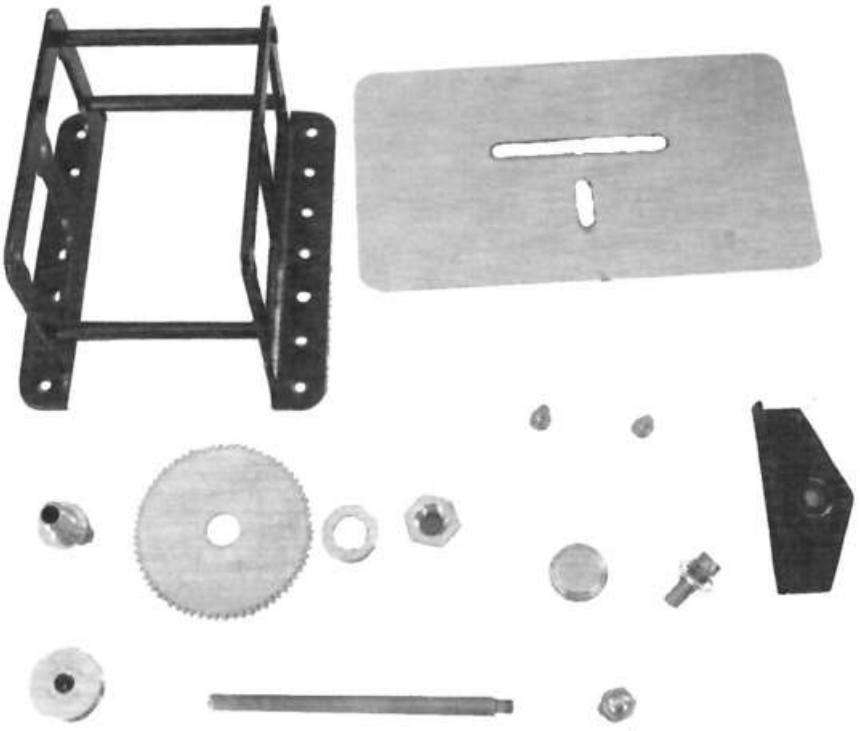
This was made from tinplate 0·019" (0·5mm) with a 1·625" outside diameter and a 0·296" centre hole. Sixty eight teeth were cut around the blade. This was done by gluing a photocopy of the blade onto the tinplate as a guide.

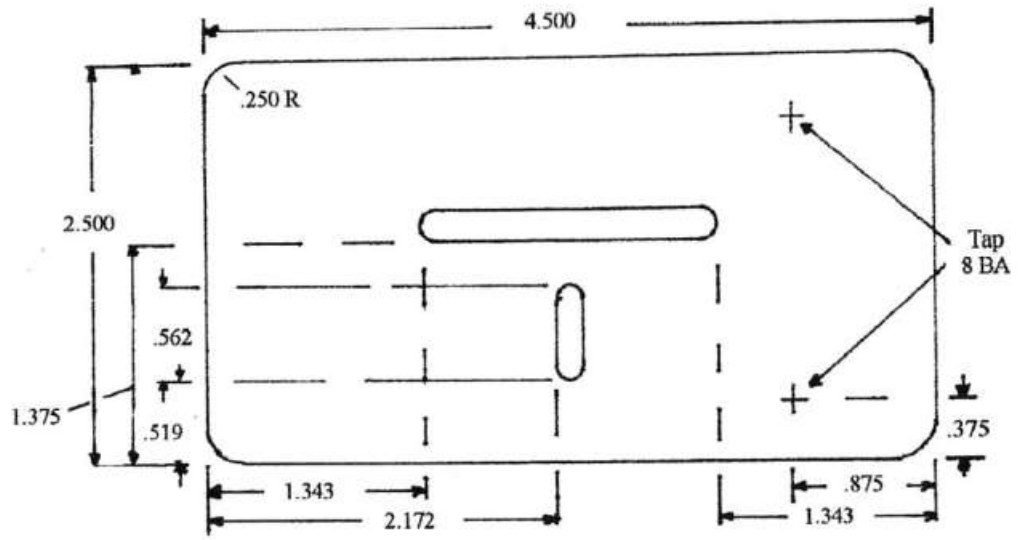
Spacing Rods

These are Meccano Axle Rods (8 SWG) with turned down ends. To obtain the length required, bolt the side frames across a Meccano P/N 52 Flanged Plate with the frames six holes apart and measure the distance between the frames. This gives you the 'See Notes' dimension.

The following parts are to be nickel plated:- Saw Table complete with Table Hinges, Saw Blade Mandrel, Washer and Nut, Fence Nut, Dome Nut, and Meccano P/N 23a $^1/_2$" Pulley with boss. The frame and fence were painted gloss black.

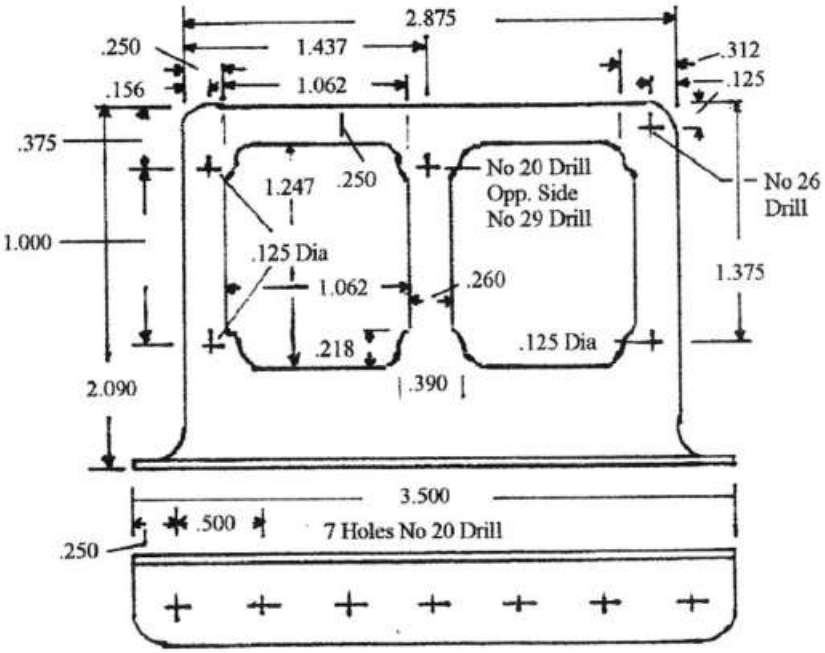
If anyone has an original box for the Meccano Saw Bench, dimensioned photos of all sides would be appreciated by the author.



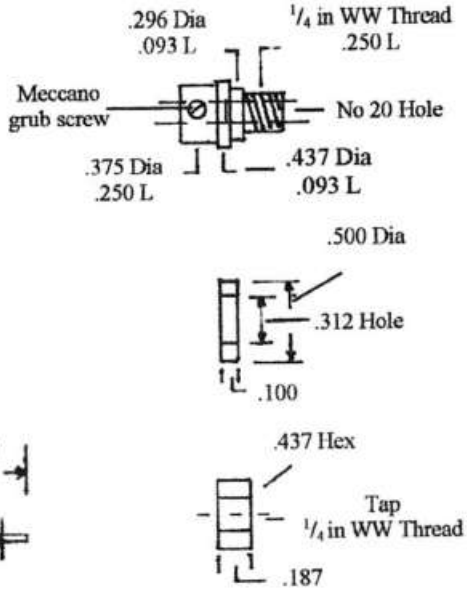


Saw Table

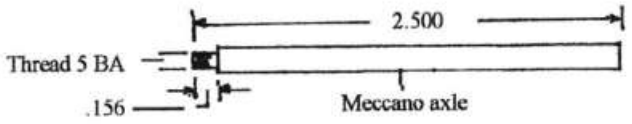
Saw Blade

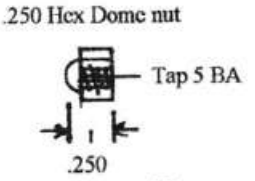


Saw Bench Frames

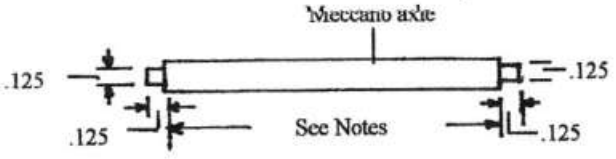


Saw Blade Mandrel, Washer and Nut

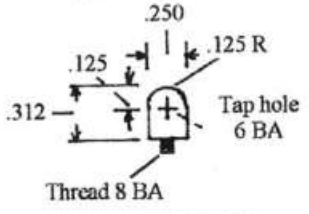




Saw Spindle and Dome Nut



Spacing Rods



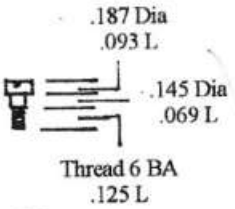
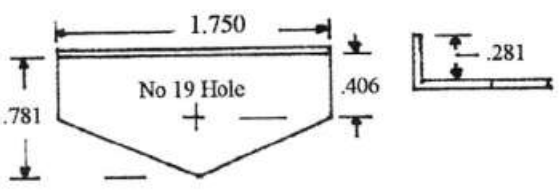
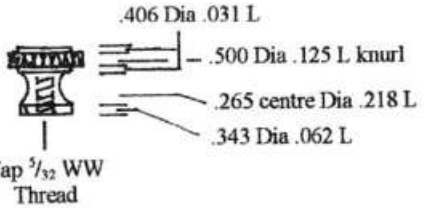
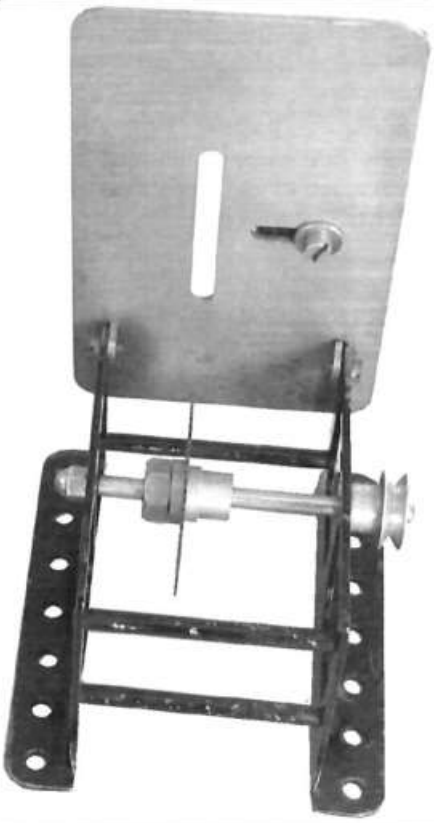


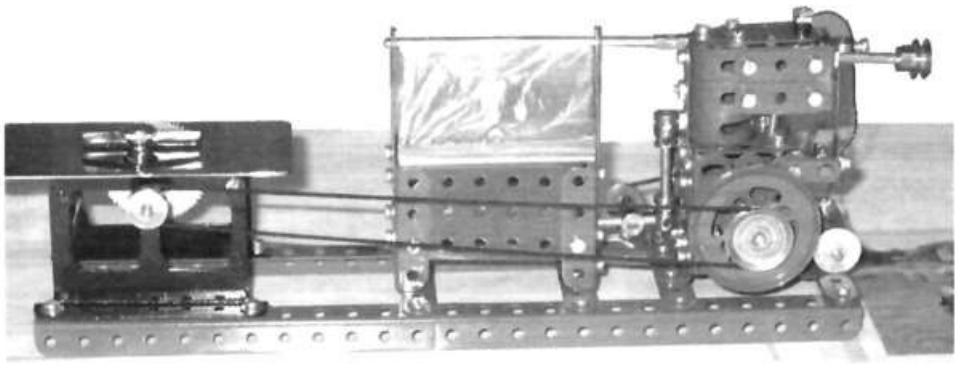
Table Hinge Assembly





Fence and Nut





This picture shows the saw bench driven by a neat little model engine.

Childhood Traumas

by Simon Johnson

It was good being a kid in the 1960s. The times may have been 'a changin' elsewhere in the world but nothing much changed in Palmerston North, NZ, apart from the yearly progression from one school class to another. Every weekend I would mow a couple of neighbours' lawns and when there were sufficient funds I'd go into Pink and Collinson's and buy Meccano parts.

Pink and Collinson's was a motorcycle shop but there was a room the size of a large cupboard behind the service desk where the Meccano parts were kept. I often wondered why a motorcycle dealer should choose to stock Meccano but in retrospect it made a lot of sense. Boys who had learned to make the best of Binns Road plans – which, among other things, assumed Meccano Rods were always straight – were ideally suited to becoming the uncritical owners of Nortons, Triumphs and Velocettes.

Across the road from our house was a Variety Store. Shops like this were common to many suburbs and stocked stationery, magazines, and often a small lending library of popular fiction. It was here I collected the Meccano Magazine each month, always six weeks late. It was here, reading the August 1964 issue of MM on the bench outside the neighbouring dairy, that I realised the world was not the predictable place it had always seemed.

"Colourful move by Meccano" ran the headline. "Meccano gets with it". Further down the page there was praise for the "highly impressive pack" which instead of a lidded box consisted of a tray and "colourful all-embracing sleeve". The only reassuring note in all this was the promise that spare parts in red and green would be available for "some time yet".

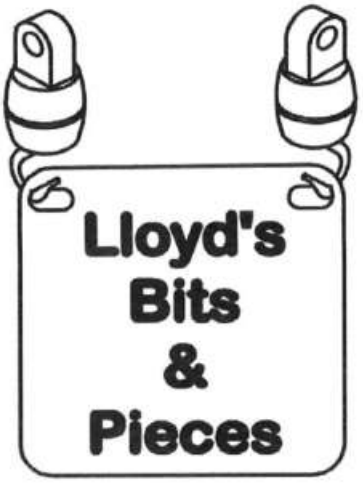
"Some time" was all too short. Shipments of English toys only came twice a year and when Christmas 1964 rolled around all the parts and accessory outfits were in the new colours.

It was much worse than I'd expected. True, the awful mustard yellow Plates were good for making earthmoving equipment but little else. I was reminded of this the other day when I looked at Modelplan 127, a tastefully updated version of the LNER 10,000 locomotive using Flexible Plates rather than Perforated Strips. Resplendent in its yellow livery it only needed 'JCB' stencilled on the tender to complete the picture.

Like all good Luddites I turned my outrage into resistance. I bought a pair of shiny zinc $24\frac{1}{2}$" Angle Girders and painted them with Forest Green enamel. The result was garish, worsened by the fact that I knew nothing about preparation and priming.

After this I took to buying second-hand Meccano. This proved a much better solution. The 1960s were the heyday of slot cars and a good deal of Meccano was lying idle. A boy in my General Science class told me I could have his father's old set for $20. It was big, he said, filled an entire suitcase, and had "big metal rings" in it. However the parts in the suitcase – which was more the size of a cabin trunk – were BLUE & GOLD. I knew it must be some sort of fake; after all, Meccano had always been red and green. After talking to a couple of Meccano friends we came to the conclusion that the blue and gold set was Japanese. There was something oriental about the colours and everyone knew how good the Japanese were at copying things. After all, hadn't a particularly devious Japanese cutlery firm named it's factory "Sheffield" so it could stamp 'Made in Sheffield' on its knives and forks?

Forty years on, Meccano's survival depends on a Japanese company. And although I still prefer my Meccano red and green. I'd think twice before turning down a trunk full of blue and gold.



MODELCRAFT & HOBBIES LTD: This firm has just celebrated 50 years of trading in Wellington, with two full page advertisements in the morning newspaper. Meccano is mentioned in the text which says, "Meccano has made a big comeback and is proving very popular right now". A Meccano section in both advertisements featured several current Meccano sets. Incidentally, my Set 10 was imported in 1972 from Binns Road by M & H on behalf of its original owner. In its October 1989 issue, this magazine featured Peter Howman showing off a Set 10 priced at NZ$2999. After several shifts, Modelcraft & Hobbies is now at the corner of Dixon and Victoria Streets in the City and is still a mecca for hobbyists and modellers.

MECCANO AT BRISTOL SHOW: "Model Engineer" magazine for Sept-Oct 2006, included a report on the Bristol, England SMEE Exhibition. The report featured a couple of Meccano models in photos and text. One was a Congreve clock by John Whiting. The other a dark blue and yellow Blocksetter from the South West Meccano Club's display.

BRIDGES: I have received from the United States a book just entitled "Bridges". Written by Judith Dupre and published by Tess Press of New York, it sets out in chronological order (from the 18 BC Pont du Gard in Nimes, France, to the 1999 AD Tatara Bridge in Japan) the histories of over forty of the world's most notable bridges. It includes technical details, maps, drawings and photos. Sydney Harbour Bridge is included but not Auckland's. It is a good reference for any Meccano modeller who aspires to build bridge models. The book itself is formidable. It measures 8" deep, is $^{3}/_{4}$" thick, and weighs $2^{3}/_{4}$ lbs. When opened it is 37" long.

THANKS, ROGER: "Hi Bruce and All. I'm just taking the chance, as a subscriber in the UK, to say how much I enjoy your magazine. Excellent articles and models to build - about my level ! A bit simpler than those shown in 'CQ'. Keep up the good work. I look forward to the next issue. Regards. Roger Fearnside, Aylesbury, UK" (From Spanner)

NEW SETS FOR 2007: Andrew Wells advises NZ. modellers he has received information on new sets for 2007. They include (with probable NZ. retail prices):
Red Arrows NZ$49.95, Vintage Construction Set NZ$89.95, and 'Mechanical Workshop' NZ$149.95. The first two have been seen in the U.K. but the third one is a mystery at present.

PLAY DOH: The popular modelling material, Play Doh, was invented 50 years ago in the United States. Robin Rye points out that, for a while in the 1960s, it was sold by Meccano Limited. (Thanks, Robin).

MECCANO ADS ON TV: Andrew Wells has advised New Zealand 'Spanners' that there will be advertisements for Meccano on TV2, TV3, the Cartoon Network and Sky 1 National from December 2nd to the 16th. They will feature 'Tuning' R/C cars, the Design Series models and 'Kids Play' sets.

FRIZINGHALL MOVES: The Meccano and Exacto agents, Frizinghall, have moved to Unit 3C, Hillam Road, Bradford, BD2 1QN, England.

LEGO SHORTAGE: Further to Bruce's item in our last issue, it appears that restructuring in Denmark has resulted in a world-wide shortage of some of the more popular Lego sets. An article in the 'Dominion Post' quoted Denmark's leading financial newspaper, 'Boersen', as estimating that Lego could lose $NZ1.9 billion because of lost Christmas sales.

A MECCANO BED: We have had to put up for a while with the copycat use of our hobby's name by a chain of menswear stores. But the latest use of the Meccano name is more startling. The Rest Bed Company in Albany, Auckland. has named one of its products "Meccano". It is described in the advertisement as a "funky chair on a sturdy polished metal frame which unfolds to a single bed. Available in blue and bone colours" Just as well it is not red/green. Whatever next !! (Thanks to David Wall for this item).

TOYWORLD'S CHRISTMAS: Toyworld's Christmas catalogue has a half page advertisement for Meccano sets including a Speedplay Helicopter, the 6515 Excavator, the 6520 Dragster and the 0570 Super Construction set. Prices have been reduced in all cases.

FAST IDENTIFICATION: Jean Francois Mauray from Mantes la Jolie, France, came across an old photo of a Meccano modeller working on a tractor and threshing machine. He appealed on Spanner for someone to identify the builder. Replies from New Zealand were quick in coming. It was the late Kelvin Liggett at the 1991 Christchurch Convention where he won first prize for his unique model.

GOOD DESIGN: Commenting on some excellent recent designs of Nikko Meccano models, Andrew Wells told on Spanner how, in 2003, he and Yvonne met one of the Nikko designers -a young lady with a degree in design who worked in their Paris office. She told them she really enjoyed her job and had a free hand with parts. In fact, if she needed a new part (for instance, the dog leg flexible strip) Meccano just went ahead and made it for her. "I guess that explains the plethora of new parts," said Andrew.

STEAM TOYS: An article in the 'Australasian Toy Maker' magazine included this piece about Meccano "Best known for its steel component construction kits, Meccano at times included a steam engine in its range as well as clockwork and electric motors to power Meccano toys" (Pauli on Spanner)

LONG WAY AROUND: The NZFMMM subscription payment from Arup Dasgupta in Ahmedabad, India, was mis-sent to Jakarta, Indonesia, but after some weeks arrived safely at Tawa, New Zealand. This reminded Arup of the time he was returning to India from Paris, France. His luggage turned up two months later, having been to Larnica in Cyprus.

NZFMM Convention 2007

Two part form enclosed with this issue
Notice of *intention* to attend must be sent by 10 December 2006
Full Registration is required no later than 28 February 2007

Spanner – December 2006

The use of Spanner emails is acknowledged

Pictures of every Part - An easy way to see illustrations of the whole range of standard and special parts <www.meccanoman.co.uk>

Crane Motor - Having offered a little praise of the humble and cheap crane motor, it's also a doddle to work on.
Pulling it apart? Bend up the two lugs that hold the white plastic end frame in the can then pull the end frame back slightly - at which point you'll find further movement is restrained by the sleeved output shaft butting up against the front bearing sintered bush. Tap the end of the shaft gently to drive the bush back into the casing and then the whole rotor and commutator assembly will come out complete.
With the brush gear in sight, you may note that the two external solder tags just clip under the bent tail ends of the brush springs. If you poke a pin in the right place to relieve the pressure you can pull out each terminal tag. You can then solder a wire to it on the bench without risk of the heat melting plastic - then simply push it back in under the tail. Usually no need to meddle with the brushes and rotor - they are quite robustly made and need no attention
Looking in the can, the magnets are simply held in situ by a 'u' shape spring. Winkle it out to release the magnets, mark for reassembly and fish them out. No danger of de-magnetism with these modern materials. You can then get at the holes in the front of the can and use them to bolt the can to a decent bracket.
When all is cleaned of swarf etc and ready for reassembly, rebuild is a reversal of strip. Lever behind the shaft sleeve gently to pull the front bearing back into its register and all is well. A drop of oil on the bearings, apply juice and it's ready for more work beyond the normal call of duty in small Meccano models
Easy. That's why I like them. Whereas the black/gold ones – when they die you might as well throw them so far away that no-one throws them back - unless it's an early one you can cannibalize for the bracket 'as in my last'! *(Geoff at Lincoln)*

Cricket Ball Motor - Just picking up your last point, I wrote extensively on the 'cricket ball' motor before. However, in the likely event that I've clean forgotten where I put it all, here are some of the essentials again.
Whereas the square cornered E1 and E1(20) volt motors used the same stator and rotor laminations and windings and so were as powerful as the reversing motors, the E06 and E020 only used half the number of the same laminations in packs about $^1/_4$" thick instead of the usual $^1/_2$" of the earlier motors. Thus it is not surprising that the air gap magnetic torque is much less and the motor seemingly 'gutless'
The motor got off to an unpromising start as follows:
1. The stator was 'scramble' wound and on the 6 volt version this meant that the inner ends of the first type of terminal screw could short on the windings.
2. The casings were Mazac and not very stiff. When Meccano Boy tried to tighten up the 5 BA holding nuts he usually succeeded in distorting the casing, with two consequences:-
(a), it cracked
(b), the bearing bores were bent out of line.
The usual consequences of (a) and (b) were that the shaft stuck - so that when you applied juice you got interesting smells, perhaps some smoke and a disinclination of the shaft to go round. The latter two faults happened to the 20 volt version as well and you can still smell the singed insulation on surviving specimens!
In consequence, good'uns are rare. Even allegedly Mint In Box (MIB) specimens may be singed! Caveat emptor!
After the war, the casing was fitted with internal tubular stiffeners round the casing screws so that you could tighten the casing nuts properly without distorting the housing and at some point - 1948 I think - the terminals changed from those silly clips to Dublo controller - style 6 BA terminal nuts. End of stator short trouble. Later on, the shaft was nickel plated about 1949 to stop it galling in the bearings and after that the motor became mechanically reliable.
Good points? The disc commutator is excellent - far better than the old drum commutator for the sideplate motors. And yes - within its fairly limited power range and with a drop of thin oil on each felt pad it will give trouble free running for ages.
A certain Sheffield Meccano Guild member used one of these to drive his climbing monkey - a model of some repute, even notoriety, for its number of appearances at shows over many years. The motor never gave a moment's trouble.
Because of the electrical layout of the motor there is a warning about not bolting the old black transformer to the same model as the motor. If you do, you may burn out the rotor or stator or transformer or all three - and that's all you need to know! *(Geoff at Lincoln)*

Design Radio Control (RC) Truck 2006 - Hi folks - I have just bought and built - with the primary purpose of trying to get this in our local Toy Shop window - the Design RC Truck.
1. It has some 500 parts including nuts and bolts. Many of the parts are common but there is a good selection of the newer metal and plastic parts. All the metal parts are stamped (Meccano N). Seems that Nikko is taking the name seriously.
2. The instructions are quite good and clear but some written words would be useful. For example - there are some very creative designs within the model but it is important to not try short cuts. Also some parts do need critical adjustment like the rear mud guards etc which won't fit unless "stretched" to the limit of the holes. There are some minor tricky assemblies which an eight year old might find challenging.
3. It does come with both the rechargeable battery and the 9 volt for the RC unit. Most unusual! The charger doesn't tell you when the battery is fully charged.
4. The RC Chassis is clever but underpowered - struggles a bit with the heavy Meccano "Rig"
5. At AUD$110 in Australia (about £45 or US$75) I reckon it is quite good value - the finish of the parts quite good although a bit of the powder coating did come off on the screw holes so I used thin washers to minimise damage. The colours (black and maroon in particular) - are very nice.

Overall, I know it is unfashionable with some to praise Nikko but this is a good effort and some very clever aspects of design - presumably by Calais. It will be interesting to see how it sells!

MotorVator

Speaking from the MotorVator's point of view, we (and I mean Meccano/MotorVator) can compete well with Lego on functionality (we have 6 motor drivers and 14 inputs to Lego's 3 motors and 3 inputs, plus a "proper" programming language rather than the graphical "beginners language") but we can't compete on price or promotion.

We have yet to find any Meccano user who can't do what they need to with the MotorVator, so I doubt that it really needs "expanding".

In terms of "polish", what do you suggest is required? We have never had any complaints about the look or quality of the unit or packaging. Yes, we have had a minor problem with the motor outputs coping with higher amperages, but we have rectified all of these at our cost.

Whilst it might look a bit daunting on the surface, we are seeing a number of users produce very effective programs (e.g. John Darlison, Dave Harvey) with absolutely no assistance from us.

We have spoken to Meccano on a number of occasions about them taking an interest in MotorVator. We got no interest, but we did later see the SpeedPlay controller be introduced, so we figured that they had this on the drawing board at the time (or shortly after) we first spoke. Meccano claim that Lego loses significant money on the Mindstorms product, but I note that Lego are just about the introduce the next generation of their controller (which still is nowhere near as powerful as MotorVator). We are still open to discussions, should Meccano decide that there is an interest.

The Speedplay computer is of no use for serious robotics because it doesn't have an open programming facility, nor does it have inputs.

We have had and continue to have steady sales of MotorVator, but not enough to allow us to invest in building the next generation, which is fully designed but sitting on the drawing board.

All I can say is, if people want the current or future MotorVator to succeed, they need to support us with their wallets. A big thank you to all those who have purchased units, and who continue to support us with questions and orders for accessories etc.

We could produce a cheaper, better, faster MotorVator II, but only if we had committed interest for significant volumes from the Meccano fraternity.

Having sunk a significant amount of money into the current MotorVator, we are not going to walk away from it, but neither are we ready to throw more money into a new generation without some confidence in sales.

We are open to cooperation with, or investment by, someone who has access to funds or production facilities to achieve the next price point. *(Andrew Wells, Meccanisms Limited, Auckland, New Zealand).*

Drifts and Podgers

According to my engineering drawing lectures many years ago, drifts were used by riveters both for aligning plates and also for truing up punched holes so that the rivets would go. They were simply rods, the slightly larger in diameter than the rivet, tapered at one end and would be hammered right in. The Meccano Drift is similar but longer in proportion.

Podgers do not appear in tool catalogues, probably because most are made from broken screwdrivers. They have handles and are usually larger in diameter than the holes that they are used to line up. Märklin part 14005 (Vorstech-Alhe) is a "Podger". Of course, Meccano Drifts are mostly used as podgers.

Most Meccanomen are unlikely to have equipment to accurately measure to 1/1000" which is needed to check whether rods will just go into holes or not. They will simply use go or no-go tests to gauge relative sizes. I have been checking a few rods and drifts using a micro meter screw gauge which my father rescued from a scrap box many years ago.

8 SWG is a standard for wire, not for engineering workshop material. As most Meccanomen know, it is difficult to get good quality rod of this size and so was unlikely to be used for making drifts.

A drift, which almost certainly came out of a Aeroplane Constructor outfit, is about 0.1558" diameter, suggesting that it was made from 5/32" rod polished and plated. Since drifts were originally only in the Car and Aeroplane sets, it did not need to be of rod size. When they were included in standard outfits, a larger diameter drift would be needed and would have been made by reducing the diameter of larger rod of suitable quality to go though a Meccano hole.

My impression, confirmed by another contributor, was that the drift that I got in 1948 was larger in diameter than a rod. Unfortunately, I can't find it. A black (Korean War) drift is 0.1605" diameter, and I think is slightly smaller.

My home made long drifts, made from 8 SWG piano wire are 0.1609" diameter. I bought the wire a long while ago, so it may be that the present stock is nearer the correct diameter.

Coming to rods, I found that these varied quite a lot - not surprising since stock would not be exactly to size, and the wire would be stretched to straighten it, and then polished. New French ones are about 5/1000" under size, and pre-1930 ones rather more. Constructo and Märklin are also a bit less than their nominal size of 4 mm.*(Richard Watson).*

As I understand it. One of the meanings of the tool 'drift' is a tapered bar used to align rivet holes, with or without the assistance of a hammer. A podger, is a spanner with a tapered handle, used by scaffolders etc. to pull bolt holes into line and used by hand only. Ref. Encyclopaedia of Science & Technology, various tool catalogues and my tool making apprenticeship! *(Ellis).*

Drill and Tap

Can someone please tell me the proper diameter drill to make a hole for a 5/32 BSW tap. I have a tap and found that a 0.136" hole is about right, but I would like to know what is recommended. *(Don Morton, Victoria, Canada).*

3.2 mm 1/8 inch. *(Hans)*

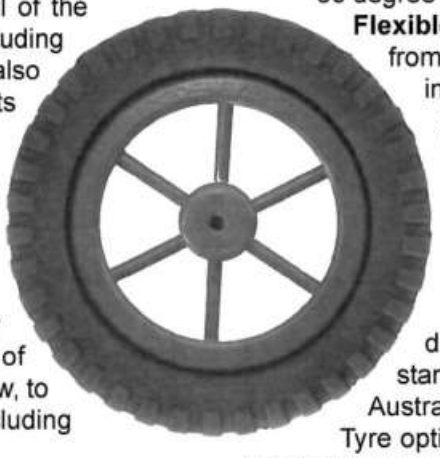
I've been using a 3.3 mm drill for years now - 3.2 always seems a bit tight for the tap! *(John Thorpe, Derbyshire).*

Ashok Banerjee Parts

by Stan Baker

It is now over six months that I have been supplying Ashok Banerjee parts throughout Australia and NZ and it is an opportune time to share with local enthusiasts some of the best sellers, plus some new interesting Meccano compatible parts. (Leave this article lying around if you want to hint as to your preferred Christmas present).

Not only does Ashok provide almost all of the 1970s Binns Road selection of parts (including complete Sets 9 and 10 of that era, but also he has the widest range of obsolete parts ranging from GRBs through to Dredger Buckets and even Grease Nipples. His range includes replicas of many other newer parts introduced by Meccano France. These Meccano replicas are supplement by a huge range of compatible parts ranging from Heavy duty Axle components, a very wide range of Wheels and Tyres discussed briefly below, to the widest possible range of gears including Helicals and Bevels.



Ashok provides parts to the original colour schemes of Binns Road and France including zinc and nickel but instead of being painted, his parts are powder coated giving far greater protection against scratching and wear. A distinguishing feature of his parts is the widespread use of stainless steel both as a further option to zinc or nickel finish in some cases but also for such small parts as Angle Girders, Fishplates, Nuts and Bolts, Washers even through to the obsolete 1920s Dredger Buckets.

Best Sellers

Some comments on the best selling products in the region that are generally available ex stock in NZ are :-

Girders of all types, including Angle and Flat Girders in Meccano "standard" and many non standard lengths up to 49" long. Stainless steel Girders are almost indistinguishable from zinc without very close study, but are much stronger and lighter, never tarnishing nor scratch under normal use. Several users have standardized on stainless going forward.

Narrow Parts. Ashok makes all the original Narrow Perforated Strips but has supplemented these with similar "narrow dimension" parts including Flat and Angle Girders, Curved Strips, Slotted Strips, Circular Strips, Slotted Strips, Double Angle Brackets, etc. These are available in zinc, nickel, green and blue colour schemes.

Axle Rods. Ashok's Axles, (including triple flat types) Crankshafts, and Handle parts are all stainless steel. These are much tougher and tighter tolerance but most importantly absolutely straight and thus ideal for complex mechanisms including gearboxes and clocks etc. Several users have replaced their total old stock of Axles with Ashok's replicas.

Nuts and Bolts. In a recent flurry of correspondence on nuts and bolts, on "Spanner" several users from throughout the world have endorsing the Ashok bright shiny Cheesehead Bolts and matching Nuts (shaped to not scratch paintwork) as equal or better than any others made by Meccano through the years or by any other replica makers. Based on the huge volume of local sales of these, many local enthusiasts would agree.

Gears. Ashok makes all standard Meccano Pinions but in addition an almost continuous range of sizes from 10 tooth up to 30 tooth in both Meccano standard widths and also in 1/8" face similar to standard gear thickness Above 30 tooth his gears are available in a wide range up to 171 tooth (plus a $7^1/_2$" Geared Plate with 285 teeth). His range includes a comprehensive range of Helicals (all available in left hand and right hand to allow the use of herringbone drives with minimal whip lash) and Bevels in both 45 degree and 30 / 60 degree configurations

Flexible strips Ashok supplies Flexible Strips from spring steel in a range of sizes up to $5^1/_2$" in red, green and yellow. These can be bent just like a clock spring and return to their original appearance. He also has shiny stainless steel Flexible Strips which whilst not spring steel, still return to their shape as well as or better than Flexible Plates.

Wheels. Ashok makes a wide variety of wheels of all sizes, As an indication four different 3" wheels, (in addition to the standard 3" Pulley) that have all sold well in Australia and NZ are discussed below with the Tyre options and illustrations. They all have rims to take the same identical selection of tyres as well as the standard Meccano 3" Tyres.

Artillery Wheels P/N 19a. These are manufactured from solid brass, and are available in polished gold or black, red, or green powder coating.

Solid Brass Flywheels. P/N 132a. These look very similar to the above Artillery Wheels but have six spokes instead of the ten and are similar in weight to the original lead Meccano Flywheels (which he also makes).

Spoked Road Wheels P/N 187w. If you are thinking of building an MG or Jaguar car then these are a must. They look pretty good on any car actually.

Road wheel Centre P/N 187y. These are "hollow" hubs very suitable for modelling truck / trailer heavy rig tyres and are available in red, yellow, blue, and nickel

Tyres are available in all sizes and three different 3" Tyre options that fit all of the above wheels (as well as the standard 3" Pulley P/N 19f) are discussed.

P/N 142l is similar to the standard Meccano 3" Tyre at first glance but is a huge improvement. Not only is it a lot wider profile but the rubber is soft and give great grip compared with the original

P/N 1303 is described as a balloon Tyre for the Artillery Wheel. It is circular in cross section and has no tread. Ideal for use on old vehicles.

P/N 142 is a Rubber Ring for 19b. It is similar to P/N 1303 but is very small cross section and is suitable for use when the Artillery wheel is used as an old gun carriage etc.

Newly Released Parts

Obtuse Angle Girders

Ashok can now supply Obtuse Angle Girders with angles of 120, 135 and 150 degrees which make up respectively six sided, eight sided or twelve sided structures. Some of these are initially available in green only, whilst others are available in standard green or blue colours as well as zinc, nickel and stainless steel. (Minimum production run quantities apply to some of these)

MWT Marton Tour and Christmas Dinner

by Bruce Neilson and Bruce Geange.

At 2pm on 28 October 2006, Marton township in the Manawatu was invaded by members and families of the MWT Meccano Club. About 35 people in all visited three members houses and caused curious neighbours to step outside their front gates to see why all these cars were parking in their street.

First on the itinerary was Francis Wilson whose house proudly has a sign stating that it was built in 1863. (See next column) Meccano models, chests of drawers, and plenty of containers of parts were on display upstairs and downstairs. However Meccano is only part of Francis' collecting interests with bottles being probably the No. 1 item.

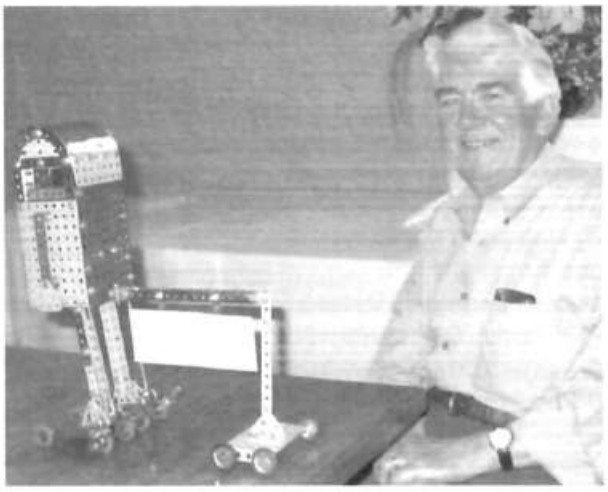
Mel Plow

We then moved onto Mel Plow's residence where the lounge was filled with Meccano ships etc. Also on display was a beautiful replica in wood and brass knobs of a 1917 No 2 vertical storage cabinet made by Mel.

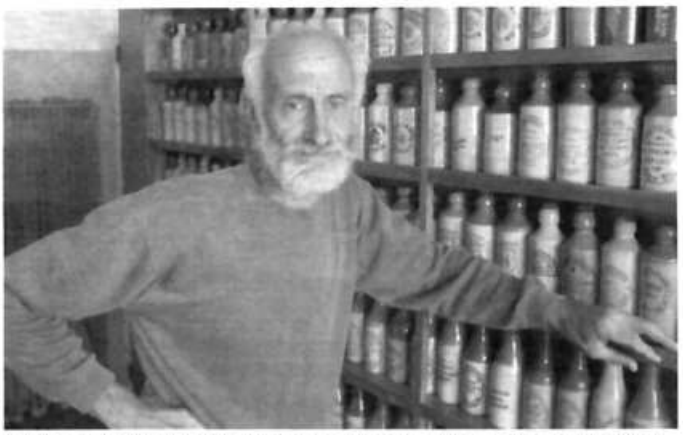
Wayne Blakely has a very understanding mum as he had spread his collection of sets for sale, models and very desirable collectables over most of the two outside rooms. The kiwi 'bring a plate' was in operation and food, drink and conversation was the order of the afternoon.

Members then re-gathered at the Cloverley Tavern at 6pm for our annual Christmas dinner where the group photo was taken, grace was said, thankyous given to our Marton hosts and their families of helpers. Roast dinner was consumed and conversation carried on until 9pm when the last of us were sent on our way by the staff.

All in all a most pleasant way to spend a Saturday afternoon and evening.



Lou Nichols brought Hamish McKarno to the dinner.



Francis Wilson with some of his non-Meccano collection.

Kendrick's Cottage

by Francis Wilson

Wayne Blakely

The cottage was built in 1863 at a cost of £56 and is the oldest residence in Marton. It was built for James Kendrick who was born in 1827 at Chatteris, Cambridgeshire, England. At the age of 18 he joined the *65th Imperial Regiment of Foot* and arrived at the Bay of Islands in November 1846 on the ship *Java* with a detachment of that regiment. He took his discharge from the army in January 1855 in Wellington and went into the business of saw-milling timber for many of Wellington's early dwellings. The mill was in Potehills Gully now part of Te Aro Street. He shifted to Marton and built a house in Calico Line which had no windows, only horizontal and vertical slots at various points so a rifle could be used if there was an attack from hostile Maoris.

He initially made boots for the army until he shifted to Ross Street and built a two storey cottage in 1863 and established a brickworks on the next corner. The Kendrick family retained a link with the brick making in Marton for over a 100 years. James Kendrick was a founder member of the Royal Rangatikei Rifle Volunteers and remained a member until 1888. He formed Marton's first brass Band in 1869, being conductor and drum major, James not only trained the band but also obtained the instruments, built the music stands, and arranged a great deal of music. James Kendrick died in 1899.

Today the Kendrick house is like a "live in" museum and numerous groups and tours regularly visit throughout the year. There is a separate building containing a large collection of antique bottles and one room of the house is used solely for old and interesting items from yesteryear; even all the other rooms carry a wide range of items from the past.

There is also a near antique owner and, Yes!, as Meccano Club members would have noticed, there's the odd piece of Meccano.

CHRISTCHURCH MECCANO CLUB

Building well since 1929

We were invited by the St John's Church (the church where we hold our meetings), to attend their 'open day' from 10 until 2 on Saturday 1 October 2006.

Charles Steadman and I were first there at about 9 am. My trailer load of chipboard and plywood panels were then taken in, and laid along the tops of the pews with about ten metres of tabletop length available by the time the other members arrived.

Other members that helped out were Peter Satherthwaite, Doug King, Ian Torrens, Neil and Grace Pluck. They all brought Meccano models and most of them also brought along backup material for their models.

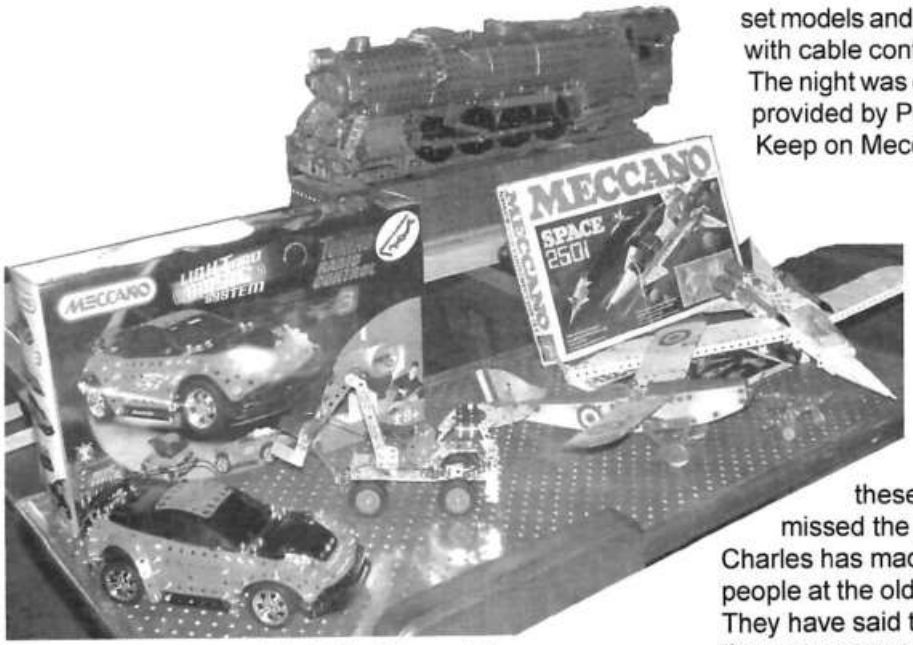
Cameron, Joyce & Robert McFarlane had a collection of K'Nex and Meccano models running.

Peter had a motorised Meccanograph running for the children to take home patterns drawn for them.

Other members to attend were Mike Howse, Alf Haywood and it was also great to see Neil's dad and brother come along (they were both past members). This was possibly our best club member attendance at a display for sometime now.

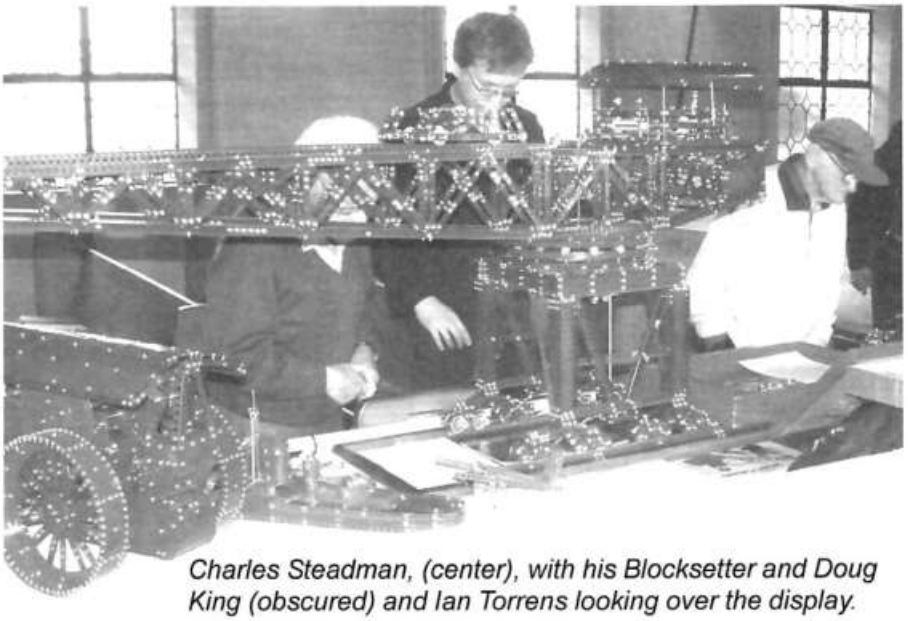
Pity that the church had not done a little more ground work on the advertising side though. (one of their committee was rather miffed that our display was bigger than all of the others put together!- that included their own!)

I'll leave the selection of photos attached to show what we got up to.



Some of Neil Pluck's models.

This month's club meeting 6 October 2006 was attended by only five, with Doug away on holiday and Ian in Hospital. The meeting was started by Peter Satherthwaite, reading out a letter from Ian Torrens, gifting his Meccano to the club. We, in turn, voted in unison to grant Ian life membership and look forward to his attendance for many years more. More is planned to be written about Ian, hopefully for next month's instalment.



Charles Steadman, (center), with his Blocksetter and Doug King (obscured) and Ian Torrens looking over the display.

Ian is now settled down in a rest home just around the corner from Doug at Church Corner, We are planning to bring him along to meetings or if the home allows, will hold some meetings there and include the other residence as well.

Neil Pluck, Peter Satherthwaite, Cameron, Joyce and Robert McFarlane, Mike Howse, Charles Steadman and myself made this one of the best attendances for a long time.

Models shown tonight included Joyce and Robert's space set models and tower bridge and Neil's 10 Set model truck with cable controls.

The night was once again finished off with a lovely supper provided by Peter, thanks again.

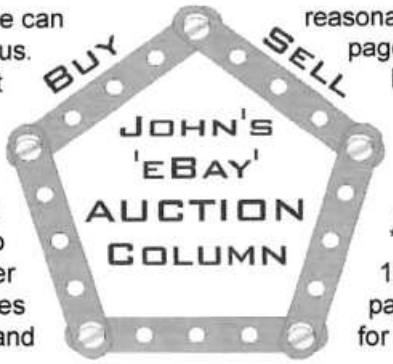
Keep on Meccanoing, Graeme O'Neill

NOTICE

Charles, Mike and Neil are getting quite excited about putting the club forward to hold the 2009 convention to celebrate our 80th year. We would like to take this opportunity to feel the water in this regard. Does anybody have any objections??? They have already made some exciting noises around town and we will pass these on here - as this notice has somehow missed the mail.

Charles has made tentative contact with the Science Alive people at the old Railway Station.

They have said that they would do the whole thing: supply the venue; arrange the advertising, admission, etc; Charles has also thought along the lines of arranging containers at the main club zones, for prior shipping down and then return afterwards. This would allow modellers to travel unhindered at their own pace to and from.



Well Christmas is nearly here again and we can think to ourselves how the year has treated us. Life is such a varying experience that it affects us all in different ways and how we handle it I believe reflects in our well being.

In this report we will look and some more interesting and unusual items of Meccano and other toys that have sold on eBay over the past few months. Sometimes the prices realised are above what you would expect and the usual cause is two bidders who do not want to lose.

* Two Booklets Elektron Instruction Manual for Outfit-No 1 and No 2. In great condition. NZ$290.

* Marklin 1152. Pre war Marklin set circa 1937. This is a Airplane kit similar to the Meccano ones of that period. It is in 'pristine' condition. Box is a marbled red colour with Marklin label in middle. Parts similar to Meccano, 90% complete and comes with original instruction manual. Looks like it makes a three engine passenger plane or similar. Sold well at NZ$1500.

* Lovely No 5 Set from the early 1950s. Not 100% but restrung in a nice box. A good buy at NZ$200.

* 1920s Oil can (not K type) no dents and plating a bit worn. Not often seen and sold for NZ$140.

* Meccano trade leaflet 1953. This leaflet measures 12" by 9" and shows Meccano Demonstration models. A single sheet has Tower Bridge, Blackpool tower and Windmill. A nice item. NZ$130.

* Another trade leaflet-this one has Travelling Gantry Crane, Elevated Jib Crane, Marine Steam Engine and Composite Display. Sold for same price as above.

* French No 2 Set 1966. This set has been restrung, comes with guarantee, great box and parts in great order. Sold for NZ$250.

*Rare tin of Green enamel Paint. This is circa 1926-33, tin unopened and contents liquid. This small tin was used by people wishing to repaint their Meccano parts. Sold for the amazing price of NZ$180. I would like to know how much that is per litre, even more than printer ink!

* A rare French Meccano 1933 Elektron Set No 2. Not sure how complete, box looks O.K., came with stringing card, small tin and many pieces. Had a small leaflet or manual with it-as auction is in French difficult to tell. Sold to a well known collector for NZ$830.

* Meccano Part No 138G. This is the White Star Line Ships Funnel one of the rarer ship's funnel. Only in fair condition, white with black band at top. NZ$100.

* Rare Tinplate pre-war Dinky Garage 1936. Cool garage with original opening doors. Nice and bright, no fading and totally original. Only a few scratches. Nice NZ $430.

* Lovely boxed Bing 0 Gauge Train Set. From the early 1920s this set is a 3 rail electric 4 volt set in good condition. The loco. runs well and had been tested. The set consists of locomotive, tender, and two passenger carriages plus a small circle of rail. Box looks complete although lid a bit rough on top. Nice buy at NZ$257.

* Meccano magazine Vol 1 No 1. Yes the first one!! In reasonable good order with fold marks (normal) and page yellowing and small section missing at top left. Four pages. Good buy at NZ$220.

* Meccano magazine Vol 1 No 3 – March/ April 1917. Considered by some the hardest to find this one was in fairly good nick. NZ$235.

* Meccano magazine Vol 1 No 5 – Nov/Dec 1917. Only in fair condition, yellowing of the pages and several splits along the folds. Sold for NZ$720 !!!!!

* Meccano Magazine July/August 1918, Vol 1 No 7. A nice example of this early Magazine. Sold for NZ$85.

* 1970s Meccano Electronic Control Set. In mint condition, never been used. Comes with manual. NZ$230.

*Pre war Bayko Set. In original box and looks fairly complete. Parts (Oak) are in nice condition; box lid is only average with one side missing and other detached. Box base is better. Looks like a No 3. These sell well – NZ$1135.

* Pre War 50 gramme weight. The real McCoy in nice condition. NZ$100.

* French Meccano Inventors Outfit Set A. This is about 1920; box looks rough but parts not to bad. Not a common set in French colours and a good buy at NZ$120.

* Hornby Sir Nigel Gresley Train Set. Engine, Tender and carriages in very nice condition. Came with transformer, lid repaired with Sellotape. Not tested but looks O.K. All inserts present. Good value at NZ$300.

* Hornby Hoverer. Boxed in yellow and green, complete with instructions, only slight damage to the top of fins. Lovely item NZ$285.

* Hornby Book of Trains 1926. Always a nice item, this one in excellent condition. A great collectible. Sold for NZ$280.

*Hornby Dublo 3 rail EDG7 Tank Goods Train Set. Comprises 0-6-2 LNER black class loco. Loco. fitted with horseshoe type motor, Three NE goods wagons, oval of track, controller etc. Set has a few faults but overall good to nice. NZ$1070.

* And finally another Hornby set. Hornby 0 Gauge No 2 Special Passenger Set. Consists of 4-4-0 Compound loco. and tender in LMS maroon No 1185, clockwork locomotive and tender very nice. Set comes with 1st /3rd corridor coach and 1st /3rd brake coach. Set is complete with pair of corridor connectors, key, lamps, spanner, an oval of tinplate and clips. Box lid has been repaired and base good. Label is Yorkshireman LMSR .Sold for the good price of NZ$4544.

Well that is all for this year. Many thanks for your support and encouragement over the past twelve months- may Christmas and the New Year treat you well and that the time you spend with family and friends be most enjoyable. Until next year, *Auf Wiedersehen.* *John Hansen.* <happypastimes@ihug.co.nz>

New Zealand Club Diary 2006

Auckland Meccano Guild.
Contact - David Wall - Ph 09 426 1965.
Meetings at 2 pm 2nd Saturday every 3rd month. 2007
10 February Peter & Jan Hancock Ph. (09) 535.5355).
12 May Neil & Eileen Carey Ph. (09) 625.4058
11 August Elizabeth & David Wall Ph. (09) 426.1965
10 November Peter & Jan Hancock Ph. (09) 535.5355

MWT Meccano Club.
Contact – John Hansen - Ph 06 325 8211.
Meetings at 2 pm as listed. Wanganui meetings at St. Luke's Church Hall, cnr. Cornfoot and Manuka Streets, Wanganui.
2006 - 9 December Wanganui.
2007 – 10 February Wanganui. Formal meeting
12 May - Wanganui. Formal meeting
9 June - Hawera. Models and fellowship
14 July - Wanganui. Models and fellowship
11 August - Wanganui. Formal meeting and AGM
8 September - Feilding? Models and fellowship
13 October - Wanganui. Formal meeting.
? December - Tour and Christmas Dinner

Wellington Meccano Club.
Contact - Lou Nichols Ph 04 973 6177.
Meetings at 7.30 pm on first Friday every second month at Konini School, Wainuiomata.
2007 – 2 February, 6 April, 1 June, 3 August, 5 October, 7 December.

Christchurch Meccano Club.
Contact - Graeme O'Neill Ph 03 322 7456.
Meetings at 7.30 pm on first Friday every month (except January) at St John's Hall, cnr St John St. and Ferry Rd., Woolston, Christchurch.
2007 – 2 February, 2 March, 6 April, 4 May, 1 June, 6 July, 3 August, 7 September, 5 October, 2 November, 7 December.

Other Important Dates
6-7-8 April 2007. - Convention 2007, Upper Hutt. email <moodys@ihug.co.nz>.

Additional Meccano Contacts
Hamilton - Don McClelland Ph 07 843 4198.
Hawera – Daryl Anderson Ph 06 278 7666.
Kapiti Coast – Bob Prescott Ph 04 905 2963.
Napier - Trevor Adam Ph 06 843 4837.
Palmerston Nth - Bruce Geange Ph 06 357 0566.
Wanganui - Tom Pittams Ph 06 345 9099.

Internet sites
International Society of Meccanomen (ISM) <www.internationalmeccanomen.org.uk>.
Meccano Webring <www.meccanoweb.com/meccring>.
Category Indexes to articles in Meccano related Magazines <www.dalefield.com/nzfmm/constructorq/bneilson.html>

Articles etc. for the February 2007 issue of NZFMM Magazine should be sent to the Editor well before 7 February 2007

Buy, Sell, Auction, & Exchange.

Advertisements in this section are free.
First insertion will be printed in full.
Subsequent identical insertions (max. one) may be abbreviated to fit space available.

Wanted to Buy - GEARS OUTFIT B in box.
Complete or nearly so. Phone Lloyd Spackman 04-2320918.

For Sale - from Meccano Supplies
The current range of new Meccano sets, Meccano spare parts, the Exacto range of Spare Parts, Nuts and Bolts. Contact Wayne Blakely, Patikipapa Rd, RD 1, Marton. Ph (06)3276184, <wayne@meccanosupplies.co.nz>

For Sale – Meccano Parts and Sets by the Wells.
We've got all genuine Meccano and junior Meccano parts and sets, geared motors, the Meccanisms range and the new Speed Play Range!!!
MasterCard and Visa accepted, cheques and direct deposit most welcome.
Andrew & Vivien & Zoe Wells, P O Box 26-179, Epsom, Auckland 1003. Phone 09 523 4447, Fax 0800 MECCANO. email andrew@meccparts.com. <www.meccparts.com>

Internet Buy, Sell and Watch Agent Available.
John Hansen, Phone (06) 3258 211, email <happypastimes@ihug.co.nz>.

This Road Wheel Centre, P/N 187y, is made by Ashok Banerjee. More about it in Stan Baker's article on page 19.

Back Numbers - NZFMM Magazines from April 2001 are available again. Contact the Editor.

Consolidated Index for NZFMMM 1976 to 2005 Vols. 1 to 29
27 pages in .rtf format availble by email from the Editor.

Telescope

by Chris Fry
The use of Spanner emails is acknowledged

"Just thought I would share this simple model with you. Inspired by recent discussions of simplicity model camera (by Greg Web ?) and the need for a tripod I fancied making an ornamental tripod mounted telescope.

Apart from the pivot-rod sockets used for the tripod feet (not essential) the only non-standard part is a three hole Collar to support the tripod braces. The tripod will actually fold up if the three hole Narrow Strips pivot on Shoulder Bolts from a Universal Joint or Swivel Bearing, leaving the three hole Collar free to slide up the central rod.

The telescope is a simulated refracting type with a 90-degree prism before the eyepiece.

The more discerning of you may notice that the equatorial mount is incomplete but I don't think this detracts form the overall impression. If I can find some spring cord I might even add some flexible hand drives.

Not sure whether this qualifies a simplicity model as it uses a total of 46 parts not including fasteners."

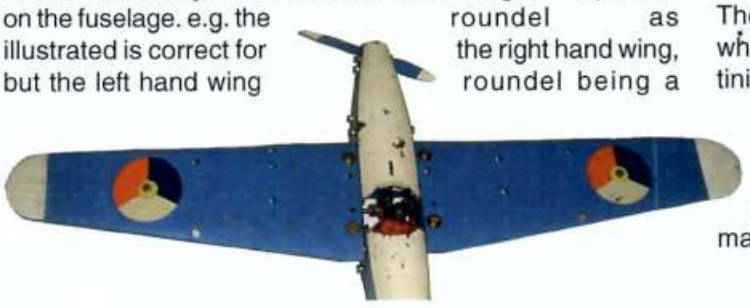
Roundels in Meccano Aeroplane Constructor Sets

by William Irwin
The use of Spanner emails is acknowledged

I have now consulted four different websites on aircraft markings, and together with Orion's references from his Rand McNally encyclopaedia, I now present my final (hopefully) conclusions.

1. The Dutch roundel is defined uniquely by the orange centre disc one fifth of the outside diameter. The sectors are red-white-blue in a clockwise direction (see first picture). The blue/red split always points forwards on the wings and upwards on the side fuselage. The roundels are IDENTICAL on both wings and both sides of fuselage.

2. The Czechoslovakian roundel has sectors of blue-white-red in a clockwise direction (see second picture). The blue sector always points forwards towards the front of the plane. The roundels are NOT identical on each side, as the white sector must always face outwards on the wings and upwards on the fuselage. e.g. the roundel as illustrated is correct for the right hand wing, but the left hand wing roundel being a mirror image will be red-white-blue instead of blue-white-red. In addition the roundel has a narrow blue ring around the outside.



3. The Dutch Meccano roundels: The Dutch roundels have a yellow/orange centre painted on a sectored disc (incorrectly labelled Czechoslovakian in previous literature and auction sites). These are shown mounted correctly on my Dutch aeroplane, pictures 3 and 4. The only inconsistency still is the colour sequence blue-white-red instead of red-white-blue as stated in 1. above. The Dutch roundels were NOT mirrored between sides so they MUST be this colour sequence. Obviously the Meccano factory got confused.

4. The Czech Meccano roundels: These were sectored discs painted red-white-blue (which is correct for the Dutch roundels!) but not as illustrated in 2. above. However they are correct for the left wing when mirrored. The outer narrow blue ring was conveniently ignored by Meccano. These were incorrectly labelled Dutch in previous literature.

5. The Dutch Meccano roundels described above have been found in 5 Dutch Aeroplane sets including my own, so I am confident they were meant to be Dutch by the Meccano factory and not Czechoslovakian. Pity the factory erred in painting the sectors in the wrong sequence. I am sure the average Dutch boy from the 1930s would not have noticed this error unless he was an avid aircraft spotter.

This has been an interesting investigation for which thanks also to Orion and Gary for their input.

Locomotive

by Charles Steadman.
The use of Spanner emails is acknowledged.

Getting stuck on building huge girder structures, I decided to try Alex DeJong's micro models site for some light relief. All I can say is that he probably doesn't have a three-year-old! Mine's first comment was "the wheels are not working — fix it please!". So now the wheels are locknutted, a simple change. Then next complaint was "it hasn't got a tender". Not having a very wide range of modern Meccano I had to get a bit more inventive, but flat girders mounted to triangular plates on a 1½" Double Angle Strip made a suitable tender. The final job was to work out a suitably scaled coupling, which of course leads to the only sensible possibility for the tiniest hook Meccano made, P/N 58b. Two of these are on a tiny bit of spring cord (one is held under a washer on the front bolt of the tender). The loop is a 2½" driving band held between the two 1" Double Angle Strips at the back of the locomotive. This combination is a massive hit with junior!!!

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