



NZFMM MAGAZINE

Volume 28 No 5

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We also caught this flypast of two of the Red Arrows Team!



On page 4 Andrew Wells describes this Robotic Arm which is controlled by a **meccanisms** MotorVator™. This really is computer control coming to grips with **Meccano**!



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NZ Federation of Meccano Modellers Magazine

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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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Extract from an email from a ex-Kiwi, Wes Dalefield.

"By the way I like the way you say 'Morning Wes'. Now and again I look at people here in the US and say 'The world will not end tomorrow because it is already tomorrow in New Zealand ☺'."

Life and Deception

Is life's normality of Truth, Reality, and the Repetition of everyday living being lost even in Meccano?

1952 – I am looking at the enlarged manual cover from 1952 that hangs on my wall. There is father in his suit and tie smoking his pipe and his two angelic boys finishing off their ENORMOUS GBS crane by the light of the fire. Glamorised? Yes. Realistic? Somewhat. Out of proportion? Yes. A typical family situation? Possibly. Generating inspiration to build a similar crane? Definitely. The 1950s generation of Meccano boys were influenced by the Meccano Magazine showing career choices, success stories, heroes in praiseworthy endeavours, given guidance in hobbies and manual skills and even improved their reading skills. Meccano manuals and models improved logic, literacy, and problem solving.

2004 – The latest Meccano catalogue is open on my table. Humans are totally absent and nearly all the Meccano models do not have a prototype in the real world. The sets are for a very limited variety of models to be built as quickly as possible. The building instructions will be a series of pictures without text. The general concept of the models is that they exist only in a make-believe world. I don't see the current boy/girl getting much life reality when their 'must-have' toy of the moment is a \$500/\$1000 cell phone to text gutter English to their mate they saw three minutes ago.

I must be getting/got old and grumpy!

R. Bruce Neilson.

2005 NATIONAL CONVENTION – 23 WEEKS TO GO

Pakuranga Youth Centre, 13c Reeves Road, Pakuranga, Auckland
Friday 25th March 2005 12 noon to 5.00 pm Sunday 27th March 2005
email <convention2005@augustus.co.nz>. Phone: ++64 9 535 5355.
Fax: ++64 9 537 3989.

Details of the competitions and prizes on offer during the Convention are included in the NZFMM Magazines February 2004, page 11 and April 2004, page 8.

The registration details will be enclosed as a separate A4 sheet either in this magazine or in the December issue.

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Zen and the Art of Meccano Modelling

by Simon Johnson.



My daughter ate a bowl of spinach yesterday. This was unusual, as she hates spinach. What was stranger was the untouched sweet corn cob on the next shelf of the refrigerator, a vegetable Susie has always seen as a treat.

"The spinach was cooked," she said.

"So?"

"The sweet corn needed boiling."

I teased her about this – typical lazy teenager, etc. – until I remembered the

Blocksetting Crane in the hall cupboard. How long had it taken to finish? Five, six years?

Nowadays everything has to happen instantly. We grind our teeth if the computer takes its time logging on, eat fast food and fill our houses with labour saving devices. The slightest delays are enough to bring on road rage, queue rage and even supermarket rage. Our children tap instant, unintelligible messages to each other on their cell phones and build things out of Lego.

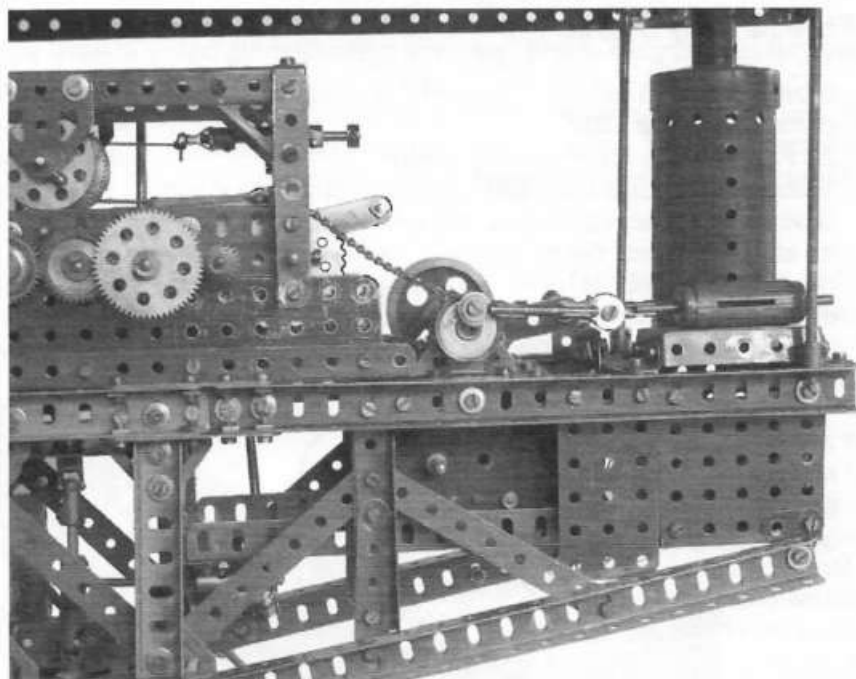
A few years ago I decided to sidestep all this. I'd take up Meccano again. I remembered how complex models took weeks, even months to complete, how time didn't matter when you were trying to make a gearbox run freely or design a decent brake for the winding drum of a crane. It was like Zen – instead of chasing your own tail, you stayed focused on the here and now.

Things began well. I built the pre-war Supermodel Baltic tank Locomotive and a couple of steam engines. My blood pressure went down. In Christmas 1998 I began the steam-driven Table Top Blocksetter illustrated in the January 1975 Meccano Magazine Quarterly. The model is a modern classic. It incorporates a compact gearbox which provides forward and reverse on all drives and a captive roller bearing turntable that is the best in the business. It is a very well designed model with few traps and by the end of the holiday I had completed both the tower and the boom. I don't have a serviceable steam engine so I powered the crane with an E20R slung beneath the cab with a drive to a dummy steam engine above. In the following weekends I

completed the gearbox and hooked up the slewing and travelling drives. The captive roller bearing turntable allows the drive to the bogies to pass through the turntable with no friction whatsoever, a big advantage over conventional Meccano turntables in which the drive rod holds the model together.

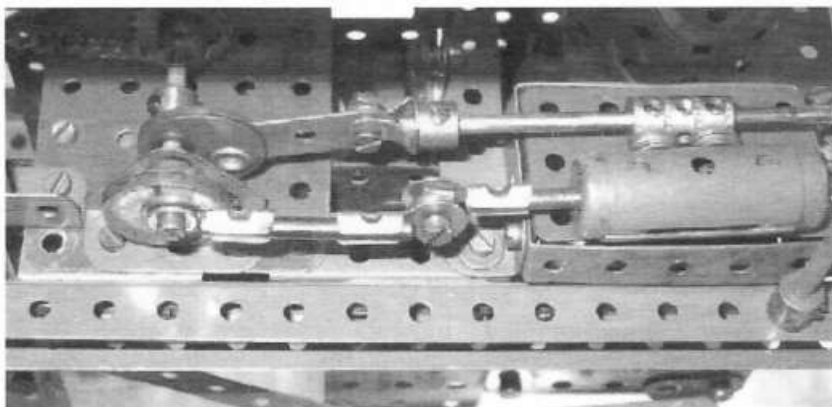
With the crane able to travel along its rails at a majestic three inches per minute I let things slide. 1998 came to an end and we spent Christmas with the in-laws. 1999 was not a good year – threats of impending computer meltdown and all that – and 2000 wasn't much better. Every once in a while I'd wheel out the crane, fire up the E20R with a reek of burning dust then tell myself that I ought to be gardening or cleaning out the basement. After all, the model was virtually finished.

Christmas 2003. I noticed that the little rubber bands I had fitted to the $\frac{1}{2}$ " Pulleys forming the bogie wheels had perished. I'd used them to improve adhesion – originally they were from the braces on my daughter's teeth. Susie hadn't worn braces since the fourth form. Next year – 2004 – she'd be at university



Shame kick-started me into completing the crane. The roller bearing had become a little sloppy so I pulled it apart and played with the packing washers. By the time the model was finished I'd remembered why I'd started it in the first place. Surrounded by pressures of our own making, there's a lot to be said for spending the weekend adjusting a turntable, adding and subtracting electrical washers until the whole thing runs true.

Editor's note: Simon Johnson is currently working on the Modelplan 86 Single Deck Bus. He hopes to complete it by the end of the decade.



Photos by Bruce Neilson. Have a look at the big colour picture on page 24.

A Meccanisms MotorVator™ powered Robotic Arm

by Andrew Wells.

The Meccanisms MotorVator is a programmable controller designed for Meccano modellers, that provides control for four motors, two Servo motors, three relays, and has fourteen inputs that can be used to sample and control actions. Figure 1 shows the MotorVator.

As good as the Meccanisms electronics range is, it is only justifiable on the basis of the opportunities it gives the Meccanoman to build models previously difficult or impossible to build.

The key aspect of a MotorVator equipped model is that it has the ability to either

1 - Undertake a complicated repeated sequence of movements, and be easily changed to a different sequence of movements, and/or

2 - React to a range of external stimuli.

These are of course the characteristics of any good robotic device: Industrial robots (e.g. car welding robots) exhibit an ability to repeat the mundane or dangerous, and more recently consumer level robots are starting to exhibit an ability to 'think' (e.g. the automatic vacuuming robot that avoids furniture and recharges its batteries from the wall socket).

In this article, I want to demystify the operation of the MotorVator by explaining the concepts and method of construction

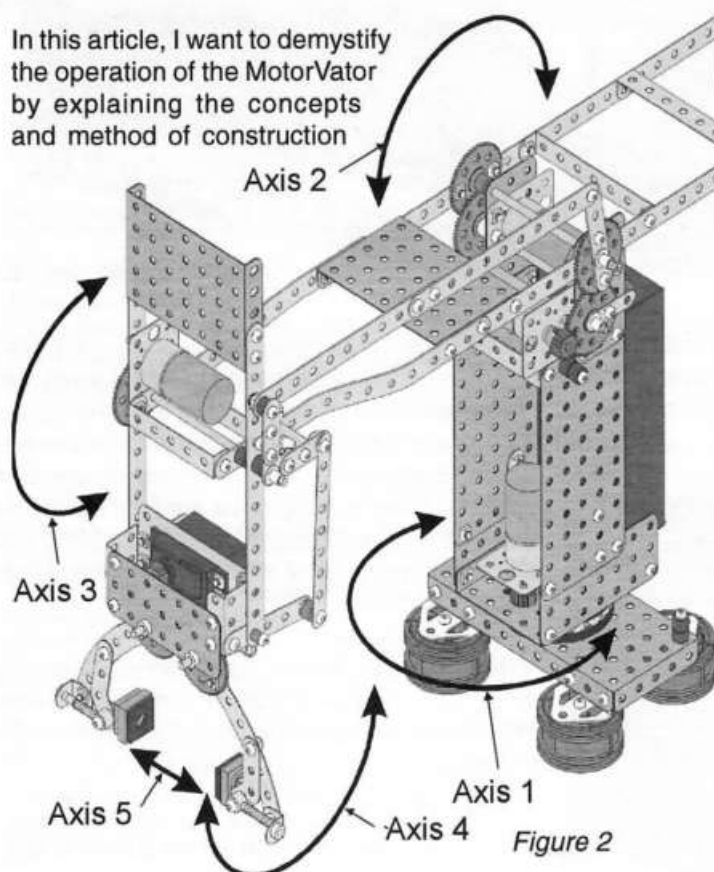


Figure 2

and programming of a general purpose five axis robotic arm.

Firstly, what do I mean by five axes? Simply, it means that the robotic arm can move in five different areas:

1. Rotation around a base point.
2. Elevation (Up/Down) of the main arm.
3. Extension of the arm around a 'shoulder joint'.
4. Cocking of the wrist joint.
5. Opening/Closing of the Hand.

Figure 2 shows the Robot with the five axes.

These axis allow the Hand to pickup and drop off objects within a reasonably wide area. The only movement that is often found on general robotic arms that has not been implemented here is a 'rotate wrist' movement.

Now each of these movements acts individually in a single plane. That is, the arm only goes up or down, the base only rotates left or right, etc. Thus mechanically we can implement each movement using simple reversible motors and gears around a pivot point (e.g. an axle).

Building the Model

This particular design makes maximum use of commonly available, cheap modern parts. In many cases other parts can be substituted; the exact design and scale are not critical to the operation and principles of the model. Full (sixteen page) step-by-step plans are available free in PDF format for download from www.meccanisms.com, or in printed form (full colour) for \$NZ20 (£7) including postage from www.meccparts.com.

The Base

The base is constructed on a P/N 52 Plate, using Trunnions and modern 187C Rims to achieve a stable platform. Figure 3 shows the Robot Base.

The base rotation turntable is constructed using two P/N 19B Pulleys (ideally bossless) separated by $\frac{3}{8}$ " Balls, with a P/N 137 Wheel Flange acting as a ball race. A P/N 168 Ball Race would work equally as well. A Bush Wheel is used to secure the central Axle, and can be eliminated if the lower P/N 19B is bossed.

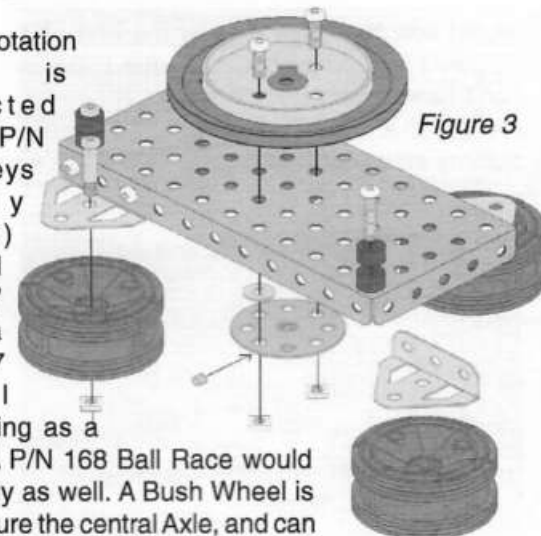


Figure 3

The Body

The "body" is built up using a non-standard 7 hole x 5 hole flanged plate as a base (this could be substituted using two 7 hole Angle

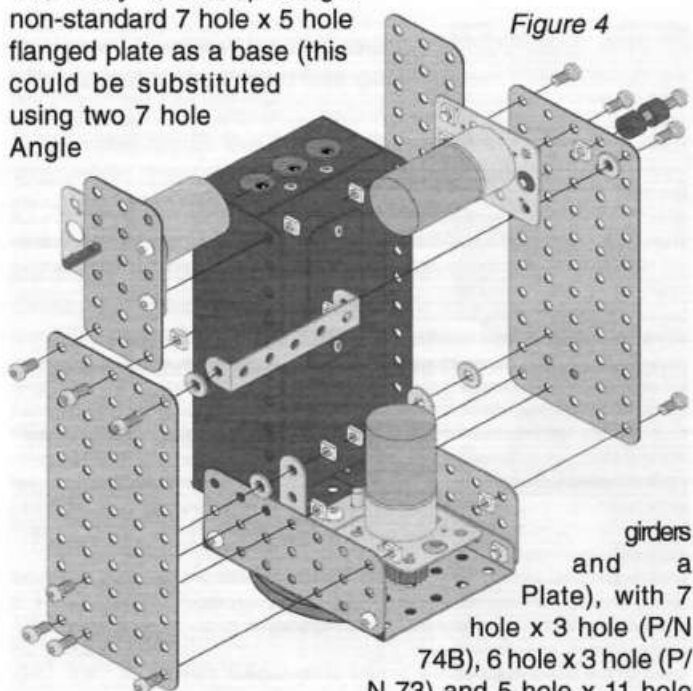


Figure 4

girders and a Plate), with 7 hole x 3 hole (P/N 74B), 6 hole x 3 hole (P/N 73) and 5 hole x 11 hole (P/N 70) Perforated Plates on each side. We used reproduction parts from Jack Parsisson of Meerlu in Victoria, Australia. The MotorVator is used as a structural member. Figure 4 shows the Robot Body

Three motors are fitted into the body:

- 1 - the Base Motor drives a 19 tooth Pinion around a 57 tooth Gear Wheel fitted to the centre axle of the turntable
- 2 - The Arm Motor
- 3 - The Wrist Motor

Note that this plan uses Meccanisms 40rpm gear motors – these are compact and have internal gearboxes that minimize the need for extra gearing to achieve the required speed and torque for each movement. The MotorVator can control any DC Motor requiring 3-12V voltage and maximum 1.5A current, so other motors could be used with appropriate gearing.

The Arm

Figure 5 show the Robot Arm. The arm is roughly counter-balanced (using sand, ball bearings, shot, lead etc) about a standard Axle, and the motor drives onto a 57 tooth gear (in this case the modern B088 Bossless Plastic Gear) fixed to the arm, via a 1:9 reduction. The plan uses an idler gear 'modified' by pinning another B088 and a plastic 19 tooth Pinion (26p3p) together, but a more traditional solution could be implemented using a standard 19 tooth and 57 tooth pair fixed to a freely rotating shaft. Figure 6 shows the arm reduction gearing.

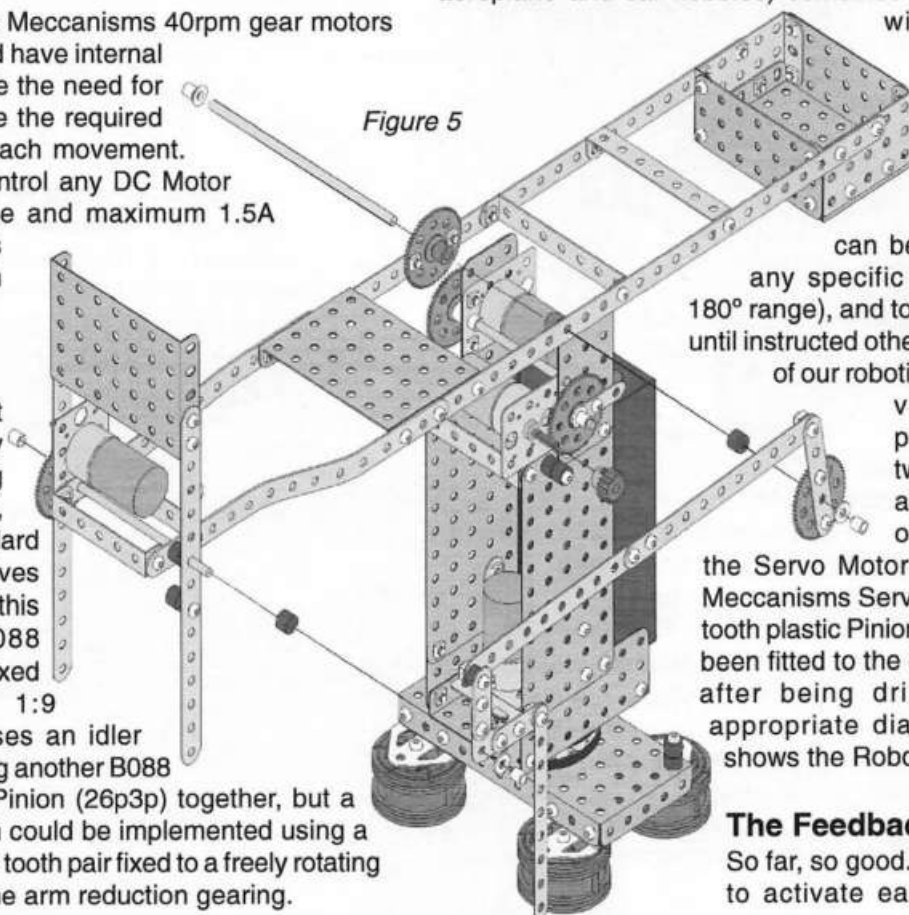


Figure 5

The 'shoulder joint' again uses a 19 tooth Pinion driving a fixed 57 tooth Gear, and the weight of the hand is balanced using weight behind the Flanged Plate above the joint. Figure 7 shows the Shoulder.

Roughly balancing the joints is important to ensure that the

movements in each direction operate at similar speeds (e.g. if the hand is too heavy then the arm will go down quickly and struggle when going up), and to minimise the 'holding power' required when the movement is idle.

The 'wrist cock' is built in the same way, but via a parallelogram and 'bell crank' arrangement to maintain a fixed wrist-to-ground angle regardless of the shoulder angle.

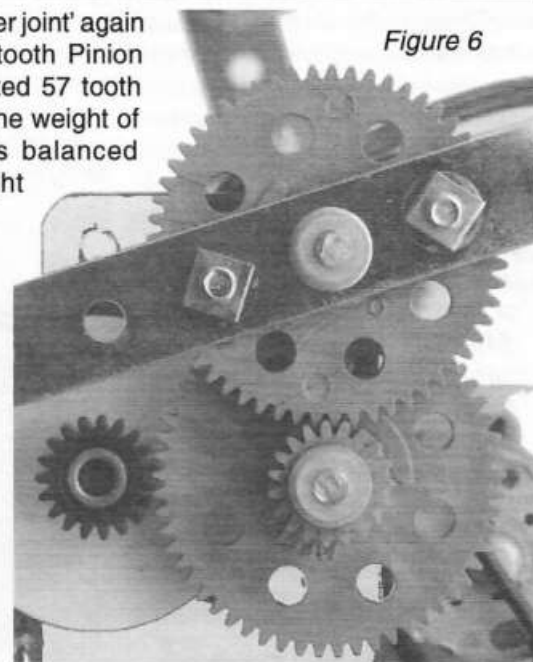


Figure 6

The Hand

The final axis is the Hand. The MotorVator allows us to make a compact and elegant solution by using a Servo Motor. A Servo Motor (commonly used in the Radio Control aeroplane and car hobbies) combines a powerful motor

with a built-in absolute feedback system. By sending the correct signal, the Servo Motor can be told to move to any specific angle (across a 180° range), and to hold that position until instructed otherwise. The design of our robotic arm hand allows very accurate positioning of the two 'fingers' to hold a variety of size of objects. Note that the Servo Motor is mounted in a Meccanisms Servo Mount and a 19 tooth plastic Pinion (P/N 26P3P) has been fitted to the Servo Motor shaft after being drilled out to the appropriate diameter. Figure 8 shows the Robot Gripper.

The Feedback Principle

So far, so good. It is easy enough to activate each movement in

either direction, simply by applying positive or negative voltages to the motors. However, the key to being able to automate the movements is to be able to get information on where each movement is, and being able to move to another specific position. To achieve this, we need a **Feedback Mechanism**. Every activity that we as humans undertake is done using feedback from one or more of our five senses. A robot is no different in that it needs information on the current situation so it can decide on the next action.

So we need to be able to determine the position of each movement. We could do this in one of two ways, either Absolute Position, or Relative Position.

Absolute Position Feedback -

If we implemented Absolute Position Feedback, then we would know exactly where each movement is currently sitting, by taking a reading. Taking the base rotation angle as an example, we could mount a potentiometer (a rotary variable resistor – common example being a volume knob on a radio) that rotated as the body rotated about the shaft. By taking a reading from this

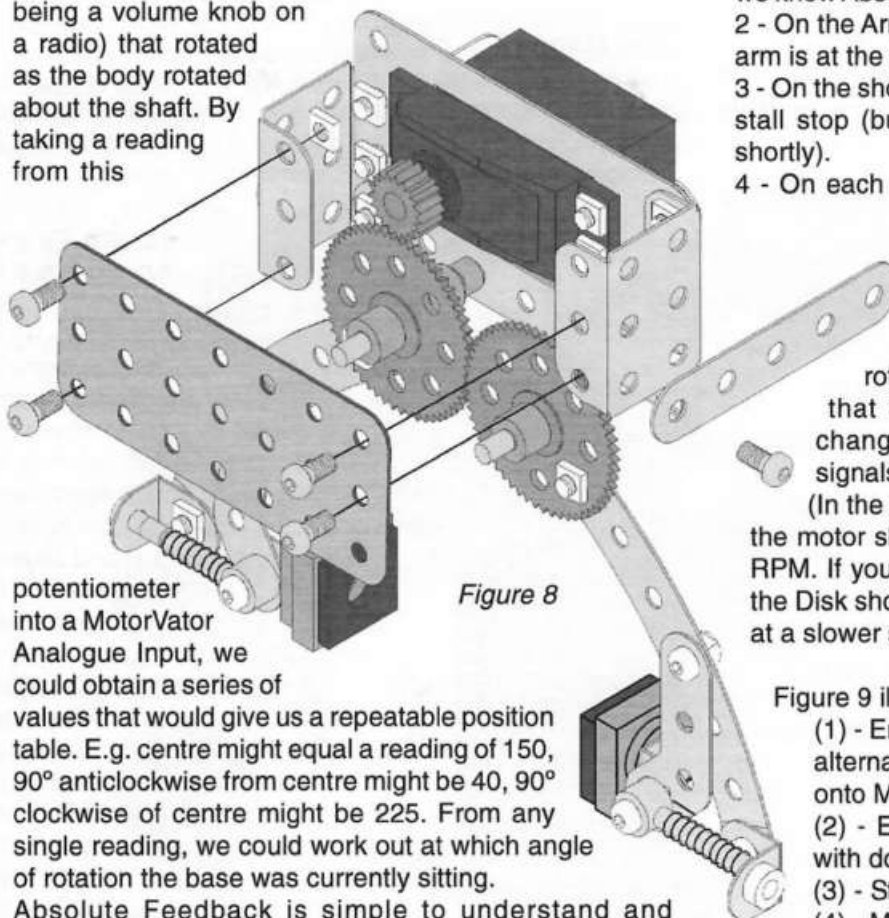
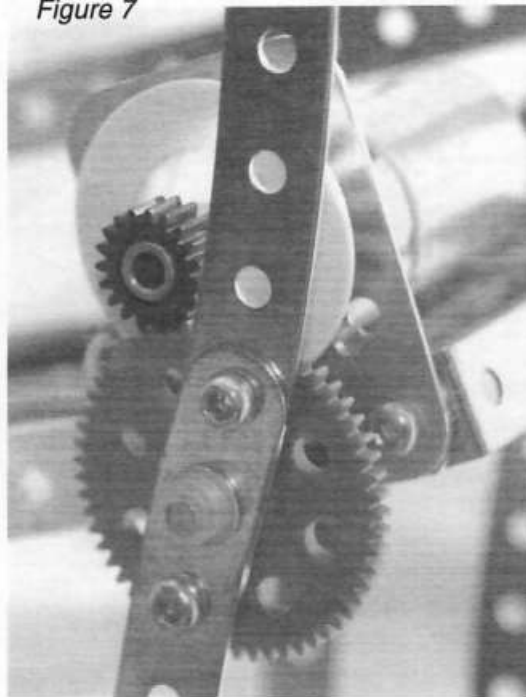


Figure 8

potentiometer into a MotorVator Analogue Input, we could obtain a series of values that would give us a repeatable position table. E.g. centre might equal a reading of 150, 90° anticlockwise from centre might be 40, 90° clockwise of centre might be 225. From any single reading, we could work out at which angle of rotation the base was currently sitting. Absolute Feedback is simple to understand and implement, but has one major shortcoming – it relies on the continuing mechanical stability of the sensor. If for example the gear slipped slightly on the shaft, then the readings would all alter, and the sequence would be altered accordingly.

Figure 7



Relative Position Feedback - operates on the principle of providing information on "how far we have moved from where we were". Again using our base rotation as an example, we might have a feedback system that could measure the number of degrees that we had rotated. So if we know that we are at the centre position, then we can easily move to 45° clockwise. Now the catch to this method is that at some point in time we need to know exactly where we are. Think of it like a pirate's treasure map: walk twenty paces north, then sixteen paces west, etc. The key to finding the treasure is knowing from where to start!

Building Feedback into our Robotic Arm

So in reality, if we are to use Relative Position feedback, we need to incorporate some Absolute Position feedback also. In this robotic arm, we have used this combination as follows:

- 1 - On the base rotation, we put a physical stop on the base and body, and fit a micro switch. We can now rotate the base Left (anticlockwise) until the switch is closed (which we read through one of the On/Off Input ports). Then we know Absolutely that the base is at the leftmost position.
- 2 - On the Arm, we fit a micro switch that closes when the arm is at the top of its elevation.
- 3 - On the shoulder and wrist movements, we fit a physical stall stop (but with no micro switch – will explain why shortly).
- 4 - On each of these four movements, we fit a Rotation Sensor board and Wheel. This consists of a small circuit board with a Black/White detector, and a disk printed with a pattern of alternating black and white sectors and attached to the motor shaft. As the disk rotates in front of the detector, we get a signal that tells the MotorVator that the colour has changed. Hence the MotorVator can count the signals and calculate how far this axis has moved. (In the plan, the Sectorised Disks are fixed straight to the motor shaft that typically turns at between 1 and 20 RPM. If you use a faster motor with more gearing, then the Disk should be fixed to an intermediate shaft rotating at a slower speed).

Figure 9 illustrates these features of the wrist :

- (1) - Encoder Disk (reverse side is printed with forty alternating white and black segments), press fitted onto Motor Shaft.
- (2) - Encoder Circuit Board, fixed to motor mount with double sided tape.
- (3) - Stall Stop for Wrist Movement.
- (4) - Micro switch for Top Arm Position.

So using the combination of micro switch and Rotation Sensor, we can position the base by rotating left until the stop is reached, then rotating right for the required number

of signal pulses (e.g. centre might be eighteen pulses from left). Now as long as we remember how many pulses we have moved, then we can move left and right to the required positions, all with reference to the initial left hand stop.

Now this might seem more complicated than having an Absolute Position sensor, but it has the advantage that it is more forgiving to mechanical movement. As long as your sequence starts off by finding the left-hand physical stop position, then even if the gears have moved on the shafts, the centre will still be eighteen pulses from left.

Now on the shoulder and wrist movements, we save on micro switches by using a physical stop and allowing the joint to stall when it reaches the stop. By monitoring the Rotation Sensors, we can determine that we have received no pulses over a certain period of time, therefore the motor must be stalled. This of course relies on using a motor/gearbox that can be routinely stalled for a few seconds! Alternatively, you could use a slipping clutch, and measure the rotation on a shaft after the clutch.

Programming

So now we have a robotic arm set up, with four motors, four Rotational Sensors, two micro switches (base Left and Arm Up) and a Servo Motor. Let's look at how we get things moving.

Notes - In this article, code samples has been shown in italics. The examples are used to illustrate the concepts, and are not a complete program in themselves. A complete set of sample code is available free at <www.meccanisms.com>.

Motor Control

The MotorVator supports control for four reversible DC Motors. We use the SetMotor command to control each motor. For example: *SetMotor 2, F, 50* will turn Motor 2 at 50% of full speed in the Forward direction, Quite simple really.

Reading Sensors

To check whether a micro switch is Closed or Open, we use the ReadOnOff() function. So to obtain the current state of the Base Rotation switch for example, we use *Base_Switch = ReadOnOff(2)* which reads the state of

the second on-off input. The MotorVator has fourteen inputs. We will be using six of these for our robotic arm: four for the Rotation Sensors, and two for the micro switches.

Intelligent Control

Now let's combine these two statements to program the Base to keep rotating left until the Base Rotation switch is closed, then stop. To make our program easier to read for mere mortals lets associate some easy to remember names with the values the MotorVator needs.

<i>Declare Constant</i>	<i>BaseMotor</i>	<i>= 2</i>
<i>Declare Constant</i>	<i>BaseToLeft</i>	<i>= "B"</i>
<i>Declare Constant</i>	<i>BaseSpeed</i>	<i>= 35</i>
<i>Declare Constant</i>	<i>Open</i>	<i>= 0</i>
<i>Declare Constant</i>	<i>Closed</i>	<i>= 1</i>
<i>Declare Constant</i>	<i>BaseSwitchPort</i>	<i>= 2</i>
<i>Declare Byte</i>	<i>BaseSwitch</i>	

Then our program looks more readable thus:

```

SetMotor BaseMotor, BaseToLeft, BaseSpeed
Do BaseSwitch = ReadOnOff(BaseSwitchPort)
Until BaseSwitch = Closed
StopMotor BaseMotor

```

We now have our Base Absolute (Left) position.

Similarly we can move the arm to the top micro switch with the following code:

```

SetMotor ArmMotor, ArmtoTop, ArmSpeed
Do ArmSwitch = ReadOnOff(ArmSwitchPort)
Until ArmSwitch = Closed
StopMotor ArmMotor

```

Rotation Sensor Handling

As discussed above, the Meccanisms Rotation Sensor changes state each time the colour of the sensor wheel passing the sensor changes from Black to White or back again.

Now we could monitor the input port and count the changes directly. This would be done as follows:

```

RotationColour = ReadOnOff(4)
Do
    If Rotation_Colour = Black
    Then Do
        Rotation_Colour= ReadOnOff(4)
        Until Rotation_Colour = White
    else Do
        Rotation_Colour= ReadOnOff(4)
        Until Rotation_Colour = Black
    End If
    BaseRotationPulses = BaseRotationPulses
    + 1
Until BaseRotationPulses = Pulses_Required

```

However, the MotorVator has a built-in way of handling changes in Input Status, which makes things much easier.

The MotorVator has Events, which automatically happen when there is change in input status. Thus, by setting up an Event, we can have the MotorVator count the changes for us, as follows:

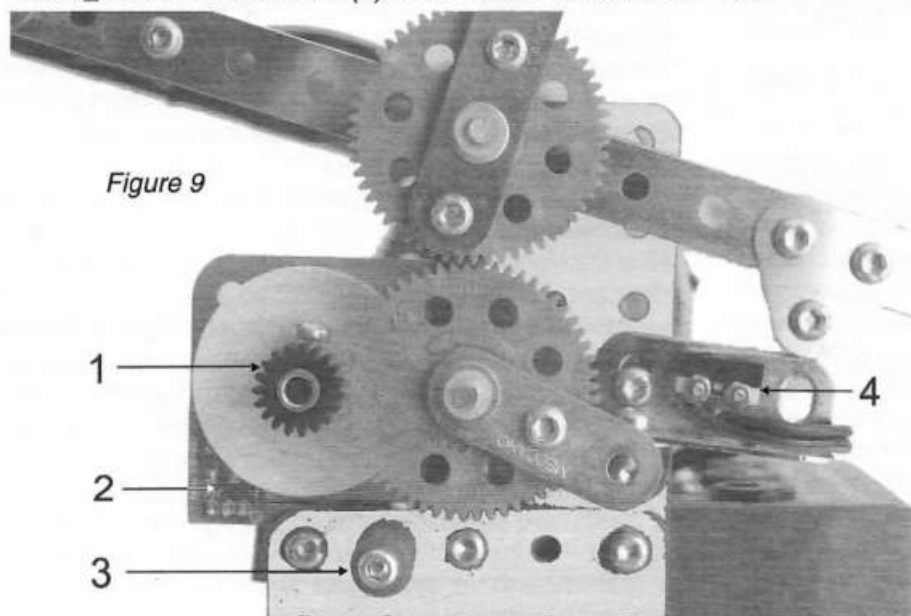


Figure 9

```
SetEvent OnOff4Event, BaseRotationEvent
Enable Events
Declare EventHandler BaseRotationEvent()
    BaseRotationPulses = BaseRotationPulses + 1
End EventHandler
Every time the OnOff4 Input changes, this routine is
automatically invoked.
```

Then all we need to do in our routine to move the Base Right by 10 pulses is

```
BaseRotationPulses = 0
SetMotor BaseMotor, BaseRight, BaseSpeed
Do ; do nothing, but wait for BaseRotationPulses
    ; to be incremented by BaseRotationEvent
Until BaseRotationPulses = 10
StopMotor BaseMotor
```

This works because the BaseRotationEvent is invoked automatically "in the background" every time the OnOff4 state changes, and updates BaseRotationPulses while the main code is repeating the Do....Until loop.

We can now make this into a Function, so that we can use it from multiple places:

```
Declare Function MoveBase(MB_Direction as Byte, MB_Distance
as Byte)
BaseRotationPulses = 0
SetMotor BaseMotor, MB_Direction, BaseSpeed
Do Until BaseRotationPulses = MB_Distance
StopMotor BaseMotor
End Function
```

So in our main code, if we want to move the base, all we need do is

```
Call MoveBase(BaseRight, 10)
```

We write similar routines for the Arm, Shoulder and Wrist.

Detecting a Stall

Earlier we mentioned that we avoid the need for micro switches on the Shoulder and Wrist movements, by using a stall stop.

We use this as follows:

- 1 - We start the motor to move towards the stall stop.
- 2 - We monitor the number of pulses from the rotation sensor within a fixed length of time.
- 3 - If we get any pulses during this time, we can assume that there is movement, so we go back and wait for some more pulses.
- 4 - When we get no pulses during this time, we can assume that the movement has stopped, and therefore we are stalled against the stall stop.
- 5 - We then stop the motor.

The Code for this is as follows:

```
SetMotor ShoulderMotor, ShoulderIn, ShoulderSpeed
Do
ShoulderPulses = 0
    Wait 50 ; wait for half a second
            ; if there is movement, the
            ; value of ShoulderPulses
            ; will be incremented by the Event
            ; during the Wait
```

```
Until ShoulderPulses = 0
StopMotor ShoulderMotor
```

The Wait needs to be long enough to ensure that there would be at least one pulse during normal movement, but not so long as to leave the motor stalled for too long.

Hand Control

The hand is built using a servomotor. With the Set Servo Command, we can position the shaft of the servomotor to any position within a 180° range.

So to open the hand, we might use *SetServo 1, F, 60* where 60° Clockwise from centre equates to the arms being in a suitable open position.

Similarly, closing the hand to grab a wooden block might require *SetServo 1, B, 45*

Grabbing a smaller block might use *SetServo 1, B, 80* Trial and error will determine the correct settings for different sizes of object.

Programming a Sequence of Movements

So now we can put it all together, to produce a repeatable routine. The following is a simplified example, that will

- 1 - Set the robotic arm in the top, left, position
- 2 - Swing to the right
- 3 - Take the arm down
- 4 - Pick up an object
- 5 - Move the arm up
- 6 - Move the arm left
- 7 - Put the arm down
- 8 - Drop the object
- 9 - Do it all again.

Loop

```
Call ArmAbsoluteTop()
Call BaseAbsoluteLeft()
Call MoveBase(BaseRight, 10)
Call MoveArm(ArmDown, 12)
Call HandClose()
Call MoveArm(ArmUp, 12)
Call MoveBase(BaseLeft, 10)
Call MoveArm(ArmDown, 12)
Call HandOpen()
Endloop
```

So now we have a functioning sequence for our robot arm. Obviously there are many further refinements that can be made, such as accelerating when starting and decelerating the speed as we near the target so that we don't overrun the mark, and we will discuss these in a future article.

A complete set of sample code is available free at www.meccanisms.com.

All of the Meccanisms items are available from the following Meccanisms Resellers:

Worldwide: MeccParts, www.meccparts.com, P O Box 26-179, Epsom, Auckland 1003, New Zealand, email info@meccparts.com, phone +64 (0)9 523 4447

UK: Michael Threlfall, email mthrelfall@cix.co.uk, phone +44 (0)23 8061 3285



A Prestigious Award

The International Meccanoman No 43 which some readers will have received recently makes the following announcement:-

The Jury of the Golden Spanner Award 2004 has the honour to announce that the Golden Spanner Award for 2004 has been conferred on Don Blakeborough. Don was nominated by the NZFMM. The jury selected Don from a number of nominations from clubs round the world.

Congratulations, Don!

The Golden Spanner Award was established in 2001 through the generosity of Andre Welti, an ISM member from Switzerland, and is a means of recognizing outstanding contributions and activity promoting Meccano as a hobby, on a local, national or international level.



Here is what Adrian Williams, ISM chairman, had to say about Don Blakeborough in the International Meccanoman:

Don Blakeborough was born North Island, on 27 January 1934. He was brought up on farms in Napier, Hamilton and North Auckland. He first encountered Meccano as a boy of 12 or so, when he was attracted by an advertisement in the local paper, the NZ Herald. He followed the usual route of building up his boyhood collection with birthday and Christmas presents, to a No 7 or 8. There was no difficulty in finding Meccano: he recalls that Wiseman's in Auckland city, who once ran the biggest local Meccano Club in the world, with 500 members, kept a great stock of parts, sets and motors.

At school, his best subjects were science and maths he would use his Meccano to present models to illustrate scientific principles of levers and electromagnetism. He also had an aptitude for woodwork but not for spelling: he claims to have been, and still to be, the World's Worst Speller

After school Don was apprenticed as a fitter and turner. In time, with his apprenticeship behind him, he joined the traffic branch of New Zealand Railways. He spent all his later working life with the organisation, gaining the position of Yard Supervisor. He retired in 1994.

He married Joyce on Christmas Eve in 1955. In 1960 or thereabouts, their growing family rekindled Don's interest in Meccano: his children were duly and properly induced into the mysteries of the hobby, and now his grandchildren are showing an interest. His special Meccano interests include historical aspects, and also clocks; his ancestors were clockmakers over 200 years ago. Looking at more modern developments, he is interested in electronics and simulated hydraulics. Like many Meccanomen, he also collects stamps, he is interested in researching the Blakeborough family history; and he is active in the affairs

of his local church.

Don was a foundation member of the Wellington Meccano Club (WMC), which was founded in 1976, and held various positions on the governing committee in the early years. In the same year, he started up a club newsletter, with the self-deprecating title of the WMC Rag. This initiative was originally intended for the WMC members, who at the time were meeting every two weeks, with a large proportion of youth members. But it had the added merit of attracting the attention of a number of 'lone wolf' Meccanomen in New Zealand, as a result of which Don and other WMC members organised the first New Zealand Meccanomen's Convention in Wellington, in 1978.

From this first Convention of about 15 adult Meccanomen, a Federation of Meccano Modellers was born and the WMC Rag became the New Zealand Federation of Meccano Modellers Magazine (NZFMMM), with Don as Editor. He stood down as editor in 1984. The Conventions have continued on a two-year cycle, moving between the four New Zealand clubs Auckland, Wellington, Christchurch, and Manawatu Wanganui Taranaki (MWT). Don is one of the few who have attended and exhibited at all New Zealand Conventions.

Over the years, Don became known among his Meccano peers as a designer and builder of note. And his Meccano interests developed, from building original models to include the collecting of Meccano of all vintages, and then to the collecting of non-Meccano construction systems. This interest led him to research, draw, write and publish two major treatises. The first was Metal Construction Systems with Frank Beadle (UK), first published in 1989. Before his retirement from New Zealand Railways he began work on the Encyclopaedia of Meccano Parts; Volumes 1, 2 and 3 were published in 1993. Then in 1994, '95 and '96, Volumes 4, 5 and 6 were published, with updates following in later years.

Having helped to found WMC in Wellington, Don moved to Wanganui in 1988, where he helped to found another new club, the Wanganui and Districts Meccano Club in 1989 (later changed to MWT Meccano Club). Again he held office from the club's inception.

Don is clearly held in high regard among Meccanomen in New Zealand. In February 1997 he was made a Life Member of NZFMM, and in May 1997 he was given an award to mark his 21 years' membership of WMC. His spirit of Meccano fellowship travels far beyond the shores of New Zealand. Though Don is one of life's natural letter-writers, his enthusiasm extends so far as to learning Esperanto to communicate with Meccanomen and others throughout the world. The work he has done in the preservation and advancement of the Meccano cause is inestimable not least in the encouragement he has given to 'lone wolves' to link up with other Meccanomen and participate in Meccano activities in New Zealand. One is bound to doubt, with all that communicative talent to show, whether he really is the World's Worst Speller, as he says he is. But there can be no doubt that he is a deserving Golden Spanner Laureate, and we offer him our heartfelt congratulations on his Award.

Vern Butcher A NZ Meccanoman's History

by Nigel Boyle

As a fresh-faced 20-year-old, Vern Butcher crafted one of the most inventive Meccano models ever built in New Zealand, the Robot Radio Receiver Clock. The second year Christchurch engineering student's *piece de resistance* was twelve months in the making and in hot-wired late 1930s radio technology. A patent was applied for and a year later Vern scooped Meccano Magazine's five guinea, (£5/5/-), (\$10.50), First prize for this incredible model.

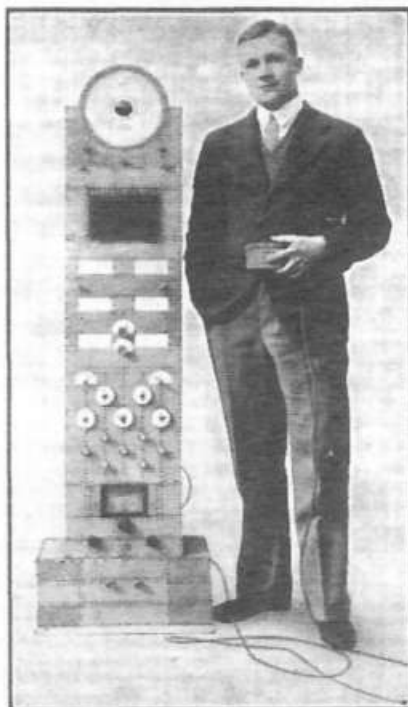
The February 1940 Meccano Magazine looks a little tired now but a dapper A.V. Butcher posing by his grand clock beams out impressively from its sepia toned pages. Back then Vern had wowed the world with his model. Chief amongst its multiple clever functions was its ground-breaking ability to programme an evening's radio entertainment with stations selected, timed and tuned automatically.

Now in his 80s and suffering terribly from motor neurone disease, Vern is extremely modest

about his Meccano achievements. Years ago he placed a couple of pictures and press cuttings in an album, pencil-marked the inside covers of the Meccano Magazines he had scored wins in and then all but shelved his remarkable passion. But sitting at the kitchen table in the Cashmere home in Christchurch, NZ, which he and wife Aldy have shared for more than fifty years, it's flooding back. In his hands is the nub of it, the brain of his Robot Radio Receiver, the only part of his ground-breaking clock to remain intact after all these years.

Vern explains that the solenoid selects a pair of capacitors to tune a radio station and automatically disengages the previous station. No need to get up from your armchair to twiddle for stations. With remote in hand you could settle back for the evening. "It was a great device," he says.

The invention drew an enthusiastic response from New Zealand's booming radio industry of the time, whose front runners included Radio Corp. and Collier & Beale. A local patent attorney applied and duly received a provisional patent on the Auto Radio Tuner as "Improvements relating to the tuning of radio receiving sets". But timing was against his idea with World War Two then in full swing. The blueprints were mothballed. Vern remembers hearing Churchill on the radio stressing the importance of radar in



Vern Butcher as pictured in the February 1940 MM

Clock Radio

Vern Butcher's extraordinary Meccano Automatic Radio Receiver Clock was about five foot tall, contained four electric motors, about twenty elector-magnetic relays, more than 2000 nuts and bolts and took about twelve months to build. The Christchurch Press newspaper noted that Vern's only objective in constructing his Robot Receiver was "some entertainment and instruction form work".

A series of dial controls could be pre-set to give a whole evening's entertainment from different radio stations - automatically switching to the desired station at the appropriate time.

The remarkable clock radio was exhibited on the Meccano stand at the local Industries Fair and went on to win Vern a five guinea (£5/5/-) (\$10.50) cheque as first prize in Meccano Magazine's Autumn model-building competition announced in the February 1940 MM.

The prize-winning model featured:

A clock telling the time in any part of the world.

A short wave indicator which lit up when programmes were available from Germany, France, England etc.

Five knobs for pre-selecting radio programme start times.

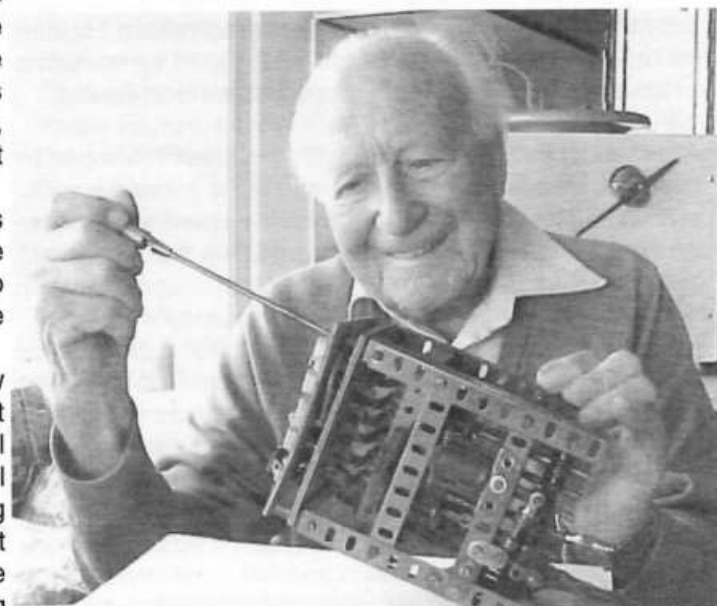
A radio receiver built from scratch by Vern.

Push buttons for manual station selection at the bottom.

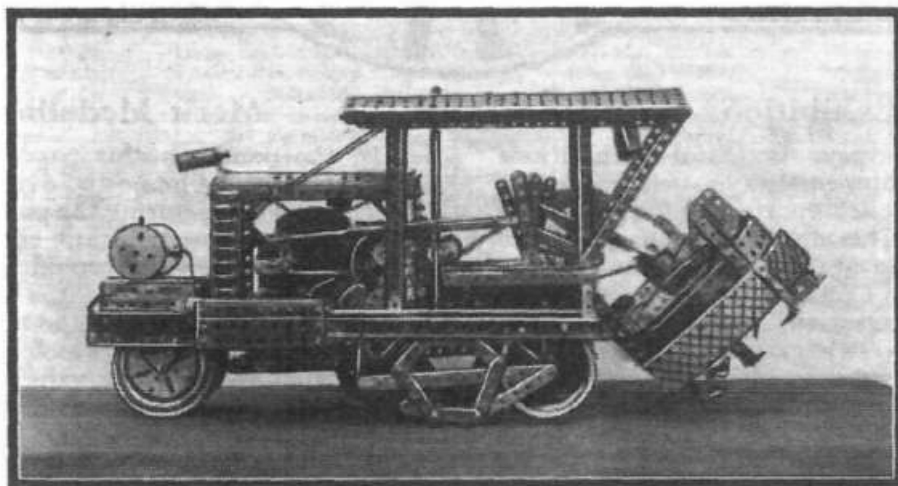
A remote control for station selection and volume.

the winning of the Battle of Britain. Radar technicians were needed and Vern joined the Air Force. Flight Lieutenant Butcher ended up in charge of mobile radar units in Italy and after hostilities wound up working for the New Zealand Broadcasting Commission to become Supervising Technician, Sound Maintenance in Christchurch.

Vern's Meccano career started as a nine year old Kaiapoi kid collecting birds' eggs to raise the readies to expand his set. "Fourpence a dozen for sparrows, threepence for thrushes and blackbirds, "remembers Vern". The Eyre County Council offer stayed until 1928 to try to keep the bird population down". Grandma topped up the kitty and it was off into Christchurch to Roy Gay's and Cox's shop for more precious Meccano parts. Models were displayed at



Vern in 2004 with the remaining fragment of the radio clock



The Gyrotiller as illustrated in the February 1937 Meccano Magazine.

Meccano Magazine mentions:

Some of Vern Butcher's Meccano Magazine highlights are:
1935 Gold Dredge, 2nd Prize Overseas Section, Meccano or Hornby Goods value £2/2/-, Page 487.

1936 Campbell's Land Speed Record Racer, honourable mention, goods value 5/-, Page 233.

1937 Gyrotiller, 1st Prize Overseas, Meccano Products value £3/3/-, Page 111.

1937 Carpet Sweeper, 3rd Prize Overseas, cheque for £1/1/-, Page 359.

1938 Thistle Cutter. 1st Overseas, Meccano products £3/3/-, Page 289.

1938 Harvester, 1st Overseas, Meccano Products £3/3/-, Page 465.

1939 Suggestion for Slip Clutch.

1940 Automatic Radio Receiver Clock, 1st Prize, cheque for £5/5/-, Page 89.

Kaipoi School. His Timaru Harbour Dredge was his first model entered in an English competition and won a third prize about 1932.

During the second half of the 1930s, Vern belonged to an informal group of half a dozen adult Meccano builders who

met at each other's homes and included Roy Gay, Jack Ancall, Roy Abbott and Doug White. He recalls his model-building highlights as the Clock, the Gyrotiller, the Gold Dredge and his Allis Chalmers Super Header. The latter model was spied by local agricultural firm Andrews and Beaven at the Christchurch Industries Fair and was later hawked around the South Island as a promotional model.

He recalls winning half a dozen prizes in Meccano Magazine for the likes of the Clock, Gyrotiller, Gold Dredger and Carpet Sweeper. His tour de force Robot Radio Clock was dismantled to build the Sunshine Auto Header, except for the tricky electric tuning mechanism which

still lives in its old cardboard box with its original patent documents.

After the war Vern made some of the first transistor radios "decent radios - demand was there for as many as I could make". He still has an oldie sitting on the kitchen bench and flicks the dial to effortlessly receive a Wellington station from his Cashmere home. Models were built for his five children but they did not show his enthusiasm. One lucky grandchild did receive a No 6 Set - the grand 1932 version! Now the balance of the Meccano has gone but ironically Vern's Meccano interest has been piqued. He's just this year discovered the excellent New Cavendish series of Meccano books, Constructor Quarterly and the NZFMM Magazine. He is amazed at all the terrific (but unknown to him) advanced Meccano activity which has been going on all around him. Perhaps if he had known earlier there may have been more supermodels from Vern's Meccano set.

Footnote: I would welcome suggestions re a suitable home for Vern's tuning mechanism out of his original Robot Radio Receiver Clock. It would be a pity for it to be dismantled! Nigel Boyle <oldtoys.tmc@xtra.co.nz>, Ph (03)329 9193, PO Box 28-014 Beckenham Christchurch.

(continued from page 12)

Decline and Return

In parallel with the declining influence of Meccano from the 1980s, a similar trend can be seen in the club's membership. Numbers continued to fall during the 1990s until eventually the club was at the point of being wound up. At this time and largely by chance a small group of adult Meccanomen got together to test the concept of retaining the club. On 1 April 2000 approximately 12 adults, including former childhood Meccano boys returned to Meccano, resolved to continue the club, but with a difference. The group decided that the club would continue, but now both as an adult club and also for model building children. Children attend on a sessional basis, with up to 12 at any one time, but usually less. Some of the girls attending have shown themselves to be very good model builders. One adult member at least is rostered on duty for each Saturday afternoon.

The Difference

The club still meets in its own premises, its own literature and its own stock of parts. The children, who may not have any Meccano of their own, still come on Saturday afternoons to build models with the club parts. Even if new to Meccano, and with paint chipped, bent and rusty parts, the children continue to build models. Many attempt much more ambitious models than they could with their own small sets. Adult members act as mentors to teach the children the tricks and techniques not written in the manuals. The spirit of generosity towards the club continues even today. Donations of parts, magazines and Meccano memorabilia from the local and even international community still continue. While not claiming to be unique, Maylands club seems to be a very fortunate and rare case of a Meccano club with its own premises and parts available for members to build with.

Maylands Meccano Club

by Ross Smith

Ed Both John Ince and Bob Prescott have been to Perth, West Australia, and visited the Maylands Meccano Club which has an unusual history. This article prepared by club member Ross Smith has also been offered to the International Meccanoman and the Melbourne Meccano Club for publication.

The story of the Maylands Meccano & Hobbies Club has a start not very different from many others. However there is a part of the story that is rather different from most current clubs. Some people may be aware of that part of the story that can be found in the club notes in the Meccano Magazine. Since the demise of the magazine the story will not be so well known. This paper sets out that story for the record.

Origin

Vivian Malmgreen founded the club in the Perth suburb of Maylands in 1935. The club was for children to build Meccano models, not adults. The club joined the Meccano Guild in 1936 and still has its original certificate signed by Frank Hornby himself. From this time on the activities of the club features in the club notes in the Meccano Magazine. Two other clubs were formed in Western Australia; one at Fremantle and one at Albany, a port on the south coast of the state approx 400 Km south of Perth.

Development

The club followed the usual pattern of development of Meccano clubs. The club met for model building in a shed at the rear of the Malmgreen property. In addition to its Meccano activities the club conducted fund raising activities and used the profits to purchase equipment and books for the club. World War II saw Vivian enlisted for military service. The club continued to operate in his absence, being run largely by the senior boys in the club. When WWII ended Vivian returned, but the running of the club remained with the boys. Vivian remained a mentor and 'wise counsel' for the club. Membership grew with the post war baby boom and was aided by migration to Australia by many families of UK origin. The relatively prosperous times saw the club demolish the original shed and build new clubrooms on the same site. These comprised a small one bedroom flat at the front and a large open hall for model making behind.

The Post World War Era

The Maylands club continued into the 1970s aided by the vibrant development and engineering atmosphere in

Australia and Western Australia in particular. The club maintained its established and fairly strong hierarchy and protocols for the boys. More experienced / older boys were expected to act as role models and mentors for the less experienced / younger model builders. The club maintained a system of graded model building for the members. This ensured that builders did not tackle models too far beyond their level of skills. With advancing age Vivian made a very



Now that's a real storage rack!

dedicated and generous decision for the club. The ownership of the property, which was his home and where the club operated, was transferred to the club. This ensured it had a home regardless of his own fate. He continued to live in the flat at the front.

Changes

The stock of Meccano parts in the club had come from all of the different Meccano eras as commonly recognised by their colours. The stock included a small amount of nickel, some blue / gold and a majority of various shades of red and green. All the parts in the club were for model building. They were not there for museum or collector purposes. This includes what would now probably be considered priceless pieces.

There is very little of the short-lived yellow / black / silver colour period. This all co-existed happily until the change to yellow / blue / zinc. Reflecting the social attitude of being 'modern' the boys set about repainting the club parts stock into the new Meccano colours of the time. (Collector purists may now start breathing again and get up off the floor!) As the club boys themselves did the repainting, much of it is brushed on by hand and only some by spray gun. Paint dribbles etc abound. In the new colours the parts were used enthusiastically for model building.

(continued on page 11)

Have We Peaked? Pt 2

The use of email from the Spanner group is acknowledged and copyright permission has been obtained from the authors. (Continued from the August issue)

6 - Have we "peaked"? Or then again, are people still interested in engineering? It would be interesting to see what correlation there is between interest in Engineering and interest in Meccano. Meccano grew up surely in an age where the engineer was king, and the monthly magazine fascinated many of us with the latest development – sky scrapers, bridges, giant lorries (trucks), ocean liners, aircraft, machine shops, and of course, the sort of railways engines where one could see and even smell the moving parts. And the Meccano Magazine was not the only source – such titles as "the Wonders of World Engineering" were common and they and the famous Eagle comic cutaways challenged us to further endeavours. Since then, as Prof. Heinz Woolf once said on opening "The Magic of Meccano" Exhibition at the Kew Bridge museum, engineering has now gone under cover and one no longer has that sense of magic at "seeing the wheels go round". You could believe that we have no-one left here but the telephone sanitisers and hairdressers, to quote Douglas Adams. There is therefore the sense that no-one is interested in model engineering any more because no-one is gripped by the real thing, and so, the argument goes, no-one is interested in Meccano either.

But as I sat watching an episode of the American TV series "Monster Garage" last night on Discovery Channel, I wondered. TV is once again full of programmes on engineering! Discovery Channel has had a whole series on "Building the Ultimate.." whether it be field guns, liners, tanks, bridges, skyscrapers, etc. Channel 4 has also broadcast some of these. For nostalgia buffs the eccentric ex-steeple-jack Fred Dibnah has done various series on historic engineering - mostly steam powered. BBC2 has broadcast "Technogames" where schools and others have been involved in building all sorts of mechanical contraptions to compete in mechanical athletics! They have also broadcast "Robot Wars", now on Channel 4, and imitated on American TV, and a similar series on Channel 4 set a world-wide competition to build vehicles which could face a wide variety of challenges at the risk of the loser being blown up at the base of a Power Station's cooling tower! Other programmes like Monster Garage are busy converting machines from the pedestrian into the bizarre, and back on Discovery there are various series such as "A car (or a bike) is born" - where genuine vehicles are built up from kits.

In short there are almost as many programmes on engineering as there are on DIY! And almost all of them are hands-on rather than spectator. When Greg and I went to the NEC Motor Show recently in Birmingham, one of the very crowded stands was demonstrating several of the Robot-Wars veterans such as Panic Attack and Chaos 2, together with the rope-climbing Skeletron from Technogames - the children as well as the parents loved it! Another very popular stand was that showing the custom-designed rescue vehicles (Ford) built for the forthcoming International Rescue (Thunderbirds) film. they have inspired a few Meccano versions over the years! No, I don't think people have lost

their interest in engineering at any scale. The TV companies certainly wouldn't be making all these programmes unless people watched them. In the War, Meccano produced its original army models. In the 60's, a time of great civil engineering and building, Meccano went yellow and produced site engineering sets, airport sets and the like. Perhaps now we should be talking cranes (is there any country without them? They even loom over high alpine villages now!) and earthmovers, construction vehicles (as the towns fill and cities grow ever more), transport fleets (there are plenty more vehicles on the roads than when I first met Meccano!) or robotic vehicles of any sort. I think the models some of you guys make of classic steam and the like are fantastic - but historically I reckon Meccano was always pretty good at matching contemporary trends. A few adverts on "Discovery" channel might do it no harm at all! (Philip Webb, Derby, UK). CPR

7 - The scope of the discussion - the peaks to be measured, the role of the Meccano company, potential public interest and what we can do to be saved - has gone rather beyond the situation that we face here and now. Let us face the actual facts.

The most important sign of the health of the hobby is surely the models that are being built and exhibited. Unless I am wrong, in the last few years we have seen ever fewer - a downward trend too steady to be dismissed as a temporary fluctuation (collecting, and the accumulation of parts for its own sake does not help).

At the same time, the average age of hobbyists grows inexorably higher. We have been buoyed by a few recent, relatively young returnees, but not enough to replace natural losses. When I arrived in the mid-1980's, clubs were thronged with children; now, sadly, most have had to disband their junior sections and trophies altogether. We ourselves are the Meccano hobby, and few more are likely to join us. We cannot reverse the tide through wishful thinking, nor alas by any practical means of which I can conceive. I, like most of us, have gained a great deal from the Meccano hobby, its clubs, exhibitions, publications, social life and institutions. But nothing, alas, is forever. It is very likely that it has now peaked, but let us enjoy what remains. (Howard Somerville). CPR

8 - George mentions the increase of standards and complexity of current Meccano models. While this is to be admired, surely is it not 'the little guy' with the basic sets, be they a No. 5, 6 or No. 10 that possibly derives the greatest pleasure. Also as he makes his models on the kitchen table, is he not the average Meccano modeller? Those who are fortunate enough to have umpteen ten sets and extra parts are to be envied, as well as their modelling. But others, like me, who have not the inclination or the know how to construct massive, complex items in Meccano, produce sometimes exquisite models, and probably represent more of the current Spanner fraternity. Quite possibly they also represent a less peaked segment of the hobby. (Brian Willis, Gig Harbor, WA.). CPR

(continued on next page)

Differential Analyser at MOTAT.

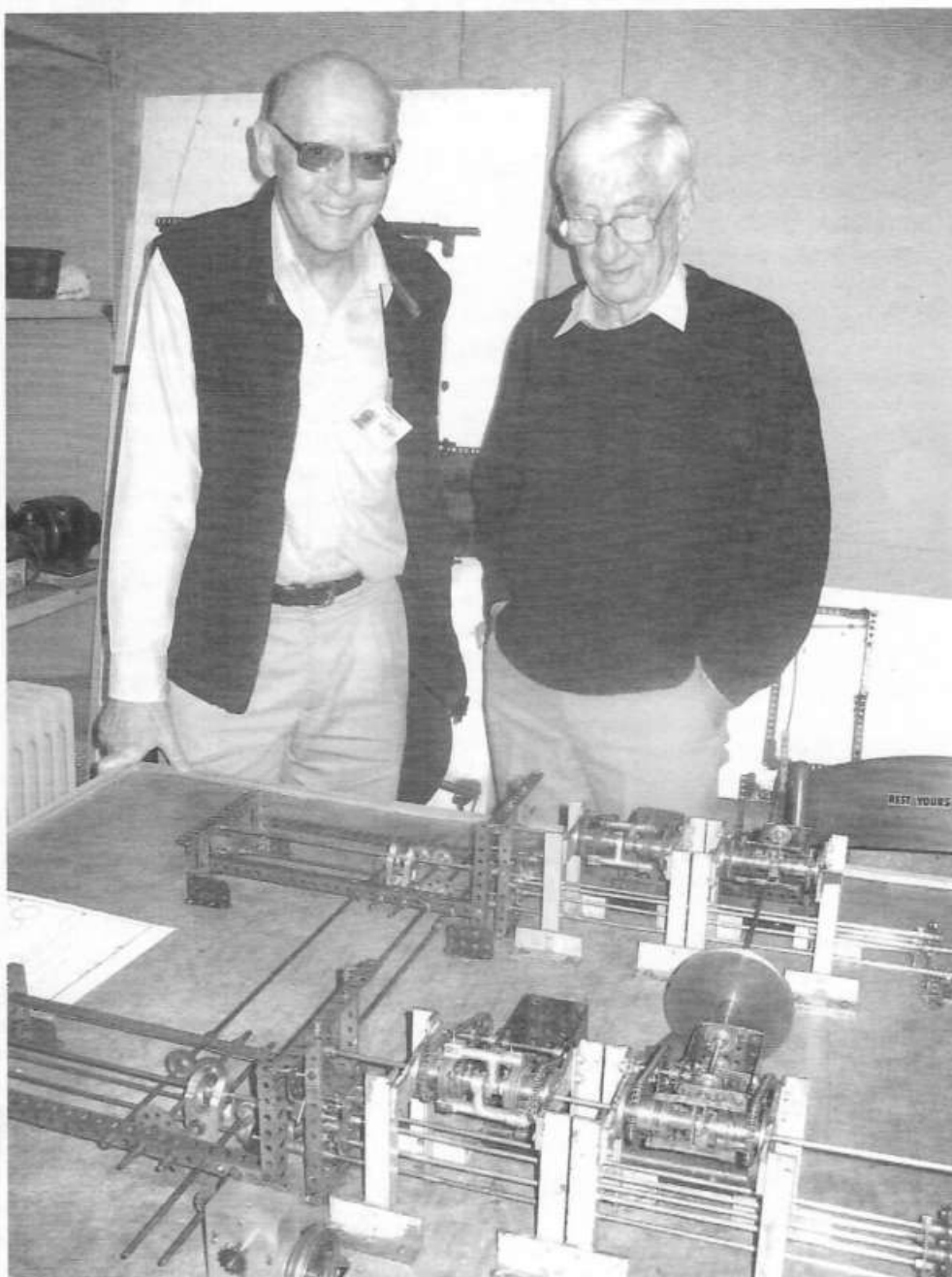
by William Irwin.

The completed restoration work on the first pair of integrators was presented to a meeting of interested persons at MOTAT on 27 May 2004. Those present were:

Dr Harry Whale (who brought the Differential Analyser (DA) to New Zealand in 1950), Dr Garry Tee and Prof Bob Doran (both from Auckland University), MOTAT staff, and restorers William Irwin and John Denton.

The aim was to restore the integrators as far as possible to their condition and appearance in 1973 when the DA was acquired and first displayed by MOTAT. Various available archival photographs assisted in this process. Certain Meccano parts, mainly girders and brackets, which were too damaged or corroded, were replaced by similar good used parts from the 1930s period. These were sourced either independently or from the spare parts accompanying the DA. All rods are as straight as possible and all movements were demonstrated. All replacements are documented and the original parts preserved.

The DA as found is set up to solve $d^2y/dx^2 = -y$, i.e. the output from one integrator is fed as input into the second integrator, and vice versa. If appropriate shafting is taken out to a plotting table to plot dy/dx against y , a circle is plotted (known as the Bush circle test). Suitable built-in anti-backlash devices at various places were pointed out. A frontlash device is missing and Prof. Whale confirmed that this had been built up from Meccano parts. Three separate adding units incorporating differential gearing were also restored and can be displayed with the integrators.



William Irwin and Dr Harry Whale view the restored differential analyser.

Since the May meeting the restoration of the plotting table has also been completed. All the units have been put back into temporary storage pending the construction of suitable support tables for display purposes by MOTAT staff. Hopefully the restored units will be displayed as part of a computer exhibition planned by MOTAT in 2005.

(Continued from previous page)

9 - Ross draws attention to the large numbers of children who were in clubs in the past. Ross, unless you are looking back forty years or more, these children are all out earning a living and raising a family. They are not in great need of a hobby. There is no reason to assume that some of them will not return to the hobby, if it is still there, when they get old enough to want to recreate some of their childhood again.

I am going to suggest that a possible reason for a current slump is the scarcity of Meccano during the 1940s. A boy

of ten in 1940 would have reached the retirement age (UK) of sixty-five in 1995. A boy of ten in 1948 would have reached sixty-five in 2003. These boys would have been less likely to get Meccano as a present, than those from the 1930s and 1950s. There was less Meccano about, and less money to buy it with. Hence there will be fewer who want to 'return'. Thus we have a current slump. But it might very well pick up again as the 1950s and 1960s retirees come "on stream". Is this an entirely fanciful idea? (Chris Bourne, London UK). CPR

Part Numbers for Clockwork Motor Drive Gears

The use of email from the Spanner group is acknowledged.

Could someone please tell me the name and part number (if there is one, or many?) for the tapered drive gear used on the output shaft in various clockwork motors from 1900s onwards? Did they come in more than one teeth number and physical size? And were they always single-tapped? (*Jim Bobyn in Montreal*).

I can answer you with a little authority on some of this as I have the original drawings in front of me (!) - courtesy of Jim Gamble, who is amused by my passion for old clockwork motors. Starting with the early No 1 - becoming the 1A when the No 2 and No 1 non reversing were introduced - all the gears were cut to 0.075 circular pitch. This equates to 41.88 diametral pitch (DP) compared with the nominal 38DP of the standard gears. The pinion has 12 teeth and has a length of about 0.570". Crest diameter is 0.334" and root diameter is 0.220". The overall profile in side elevation changed slightly over the years and they certainly became double tapped at some stage, although there appears to be no reference on the drawing to this change. What is for certain is that the number of teeth and teeth shape has not changed.

Although I don't have the No 2 drawings to hand I am certain that the same circular pitch is used. This accounts for the fact that, because of the closeness to standard gear pitch, it is possible to mesh a standard gear directly with the No 1 gear on these two motors. Although the No 2 pinion is longer, the tooth profile appears to be identical to the 1A and in fact if you have lost your No 2 pinion a No 1A plus several washers will save the day. It also accounts for the fact that you can run a No 1A pinion with a 25 tooth gear without too much distress at low speeds. (In response to Tim, all my No. 2 motors - about 12 at the last count - have 12 tooth pinions.). These pinions have never had a part number in the standard system, the No 1 being simply 'job no 554'.

The pinion used in the post war No 1 on the other hand is a 13 tooth of a different profile. I don't have the drawing for this but I do have the drawing for the post war No 1 motor No 1 gear. On this, they have changed to a tooth shape in accordance with B.S.978 - 1941 (double arc form). The pitch is quoted as 'module 0.6, circular pitch 0.074, tooth depth 0.047"' The last figure is of particular interest as it compares with a tooth depth on the 1A pinion of 0.057" and thus explains what is visually obvious comparing the pinions side by side - that the post war offering has shallower teeth as well as a different tooth profile.

Reverting to the pre war No 1 non reversing motor, this does have a 13 tooth gear. However, examination under the magnifying glass shows this to have the same tooth profile as the 1A. An additional point is that a casual examination of all the spare motor wheels and innards in my spares box confirms that all the pre war intermediate gears will mesh together - but not so well with the post war No 1 gears. So, although I cannot prove it unless more drawings come to light, short of a detailed gauging exercise it looks like all three - 1, 1A and 2 - use a circular pitch of 0.075, or 41.88DP throughout the train.

A final note for to-day. I have also to hand the drawing for

the 10 tooth E1 electric motor. What is of interest is that the circular pitch is quoted as 0.083, giving a DP of 37.85, c.f. a nominal 38 for the standard gears. The tooth depth is also quoted as 0.060" - which again confirms casual observation that the standard gear teeth are deeper than the motor pinion teeth.

So a quick tabulation based on running a micrometer over the contents of my spare pinion box : -

No 1A motor: 12 teeth, 0.075 circ. pitch, 0.575" long;

No 2 motor: 12 teeth, 0.075 circ. pitch, 0.710" long;

No 1 n/rev. motor: 13 teeth, 0.075 circ. pitch, 0.658" long;

No 1 rev. motor: 13 teeth, 0.6 module, 0.704" long.

Finally for to-day, the 1A drawing shows a $\frac{5}{32}$ " Whit thread right from 1915, whereas the 10 tooth E1 and E1(20) pinion definitely started with 6 B.A. grub and changed in about 1934 - 35 to $\frac{5}{32}$ ".

Trust this of some interest. I believe these pinions were only known by their internal 'job numbers' and never had a Meccano identity (part number) in original parts lists.

Geoff Brown at Lincoln

New Meccano Eiffel Tower Poster

by Doug Harris.

This is made from a reproduction of the original point-of-sale stand-up display of about 1920. Apparently a repro run of about thirty was made by an art layout man in Melbourne, and the quality is very high. The edges look to have been die-cut, but closer examination reveals it as hand work. Doing a batch of thirty must have been quite a task! The print itself looks to be a very high quality laser or similar print, mounted on card. I obtained mine as a second-chance offer on eBay.

Jim Bobyn in Montreal wrote to me: "I have a very rare original one of these signs. After comparing it with period illustrations on box lids and magazine ads and instruction books, I'm sure it dates from the WW1 years, considering the boy and the unusual (Primus) style of P/N 108 Gussets [with the large round centre holes, at the top] that were corrected in (I think) the 1918 instruction manual."

The originals must have been exquisite, with the delicate pink flesh tones that they were able to obtain with printing processes in those days. If you remember the old Pears Soap ads, it would be in that class.

I've tried to retain the original feel of the artwork, and brought the nickel back to look like nickel, within the restrictions of copying what is already a copy and I think this is one of the best results I have obtained so far. A3 size prints are available to members at \$15 plus post and packing from Doug Harris, PO Box 82323, Highland Park, Auckland 1705, New Zealand. Email <digbee@xtra.co.nz>. You are invited to view at my poster website: <www.geocities.com/hornbymeccano/>.

Editor's note - I have a couple of these posters and can recommend them as pieces of brilliant Meccano artwork which will look very smart on the wall either as a laminated poster or framed prints. The paper/card is thick and high gloss, the ink crisp and solid and overall a quality print. Mine arrived gently rolled inside a cardboard tube and flattened out nicely under a light weight.

(Turn to page 24 for the illustrations of the posters)

Bruce's Choices From Around The World

by Bruce Neilson.

Runnymede Meccano Guild Newsletter No 55 - June 2004 - 52 A4 pages in black and white.

Pick of the articles - For the historian, the Meccano Marklin connection through the Manuals of 1908 to 1918. 3 pages of text and pictures which sheds some light on the connections between these two companies in the early days

Also included in this issue are - 'Heartograph' Meccanograph modelplan by Andreas Konkoly, using P/N 167b Flange Ring and P/N 91 Plastic Caterpillar Track Links as a gearwheel, Nursery Clock modelplan by Andreas Konkoly, Railplane, Jumbo Crane rebuilt from 1956 set 8 and four exhibition and meeting reports from CAMS (France), Kew Bridge, Skegex and Runnymede.

Canadian MeccaNotes No 34 - June 2004 - 28 A4 pages in colour.

Pick of the articles - An in depth look at the Inventors Outfit B from 1919 to 1923 by Ivor Setten. He has shown how he identified the foggy introduction dates and discussed the two versions known.

Also included in this issue are - a rebuild of CMN Maypole braider modelplan 13, Schertzer rolling lift bridge, US Meccano bolts, crankshaft mechanisms, Ocean liner general modelplan, P/N 69 Set screws, and an exhibition reports from Kingston Railorama.

The Meccano Newsmag No 99 - July 2004 - 40 A4 pages including 6 pages in colour.

Pick of the articles - The Constructor projects published in this magazine have always been solid articles and this one "Demonstration Model of Galileo's Escapement" by Mike Edkins and John Bridger is no exception. 7 pages of text and diagrams and 8 photographs lead the builder along. All Meccano including the spring from a No 1 Clockwork motor. Brilliant!

Also included in this issue are - Serial epicyclic gearbox theory, an Orrery to demonstrate the three moons which circle Upsilon Andromedae, Pawl and Ratchet mechanism 1 1/2" in diameter, Set 2512 commentary, future of Calais production, London bus using Mechanised Army parts, and three exhibition and meeting reports from CAMS (France), Kew Bridge, and North Midlands.

MW Modelplan 150 - Hydraulic Platform Fire Engine by Tony James - June 2004 - 40 A4 pages including colour. This detailed modelplan is made up of 4 pages of colour photos, 18 pages of text, 2 pages parts list and 16 pages of line diagrams.

The model can be built from a No 10 set plus PDU motor and 22 common parts and is approximately 1:10 scale. Based on a 1967 ERF Simon Snorkel hydraulic platform the cage lifts to about 72". Cord is used to lift the booms.



MW Modelplan 151 - Level Luffing Crane by Eric Taylor - June 2004 - 32 A4 pages in black and white.

This generalised modelplan is made up of 20 grey photos, 11 pages of text, 1 page diagram and no parts list.

The model is recommended for "the experienced constructor who have a substantial supply of parts" including an E15R and three PDU motors. This modelplan originates from 1967 as Midlands Meccano Guild Supermodel No 1 and has lurked among the Meccano fraternity most often as a blurred set of photocopies but no details as where to get

a clear modelplan. This publication of clear photos and text preserves history and lets modellers (with ample floor space) fulfil giant crane ambitions. And I mean giant being "7' 8" high with the jibs retracted and has a maximum radius of 4' 6" from the centre of the tower and from which it can luff to the minimum radius of 1' 9" in 37 seconds.

All operations are controlled remotely from a push button console (made from Meccano)

MW Modelplan 152 - Fully Automated Rotawheels by Phil Ashworth - June 2004 - 36 A4 pages in black and white.

This detailed modelplan is made up of 16 large black and white photos, 12 pages of text, 2 pages of line diagrams and 4 pages of the CAMAS 1989 revised automation by Keith Cameron. The model stands 48" high on a 19" x 13" base

"Journalled 26" above floor level, at the apexes of two 'A' frames is a double arm boom of 28" diameter carrying at each extremity a 16" diameter wheel. Each wheel has six chairs circumferentially disposed. The double arms is driven by a base mounted motor via reduction gearing and sprocket chain and by means of suitable gearing and shafting, the main wheels contra-rotate with respect to the double arm. Thus, each chair describes an approximate triangular locus in a vertical plane, producing adequate passenger discomfort in the process.

The model includes a pay-box, approach steps and mechanical barriers. All motions are programmed for automatic operation and the sequence of switching is assisted by a second electric (Emebo) motor.

The gear ratio between wheels and rotating double arm is 2 2/3 to 1; hence, at each revolution of the latter, a different pair of passenger chairs is presented to the loading platform. The model is electrically sequenced to provide five half revolutions of the double arm with suitable pauses for the loading / unloading sequence during which the mechanical barriers are automatically operated, followed by a continuous pre-set running period. The whole sequence then repeats. Most of the parts required are found in a No 10 Meccano Outfit but a few additional parts are required and some Elektrikit parts for the control switching. The main drive comes from a PDU Motor. As the model is intended for those constructor who are experienced modellers and who have adequate supplies of parts, no parts list is given but Elektrikit items are listed later in the Building Instructions for convenience.

MINI MOLE SELF-GRIP WRENCH:

In the UK this very useful tool was 12/6d in 1969, 14/- in 1970, then 70p in 1971. Today it would cost several pounds.

A SIMPLE ROLLER BEARING:

Four free running $\frac{3}{4}$ " Flanged Wheels are mounted, bosses outward, on $1\frac{1}{8}$ " Bolts locked by Nuts in the flange holes of a Boiler End. The Flanged Wheels run between the lips of two 3" Pulleys. The whole unit is centred by a Rod journalled in the bosses of the Pulleys and through the centre hole of the Boiler End.

(MM 8/1970).

NEW USES FOR OLD CHURCHES:

Arising from the Melbourne Meccano

Club's Annual Meeting using a "defrocked" church for part of its exhibition, Arup Dasgupta tops this on "Spanner2" by relating that the Indian space program started off in a little church in a fishing village away down south on the west coast of India. The parish priest was happy to see his church put to good use and today it is a museum of the memorabilia of India's space program.

KEY CLIPS: Early Meccano wheels, of course, had no bosses for grub screws. Instead, the axle hole was elongated to take a key clip. To fix a pulley on a rod you first positioned it, then slid it to one side while the key clip was placed on the rod with the tongue where the pulley was to go. By sliding the pulley back it would wedge the tongue of the clip against the rod. Fixing pulleys thus required a firm grip and substantial pressure. The introduction of tapped bosses about 1913 made the key clips redundant and they are now collectors' items.

(Bert Love in MM, Nov., 1971).

"THE TOY STORY": I reviewed this book about the life and times of Frank Hornby in our October, 2003, issue. It has been reviewed by Tony Potter in the NZ 'Sunday Star-Times' of 3rd October this year. Mr Potter points out that to readers born after 1950 the name, 'Hornby', isn't as familiar as it is to those born between 1920 and 1950. He quotes the names of some of the many imitators of Meccano including the Australian 'BetaFit Meccano' (Never heard of it!). One thing Mr. Potter and I agreed on is the dullness of the chapters about Frank's election as an MP in 1931. Incidentally, the publishers have changed the title to "The Toy Maker".

TOO HOLEY!: "A story about my 40 years old model of the 'Princess' loco. About ten years ago some of us mounted an exhibition on the platforms of the principal station, Loughborough, of one of our preserved railways. I set everything out, including my loco. By and by one of our famous loco types, a 'Black Five' pulled up alongside - wreathing me and my models in steam. The driver, puffing on his pipe, contemplated my efforts from the safety of his cab for a few minutes, then observed laconically, "Never

boil water in that, mate! Boiler's full of holes!". (Geoff Brown on "Spanner").

EZYBILT HISTORY: Many of us have Ezybilt and Buz parts mixed in with our Meccano. Here is a little Ezybilt history from Jack Little and Tony Press in Melbourne, on "Spanner2". "Ezybilt started manufacture in Melbourne around 1932, transferring to Adelaide in the early 1940's. It had a varied career, changing owners four or five times but was still produced in Adelaide until 1966. It seems likely that it was also produced in New Zealand from 1966 to 1968."

ADAPTING MODEL PLANS: "I rarely build models from plans, exactly as instructed. I often change things because I think of a better (or different)

way or substitute for parts I don't have or don't wish to bend." (John Stark, Nelson, NZ. on "Spanner").

MULTIPLICITY: Joe Attard in Malta reckons he has the equivalent of 28 ten-sets.

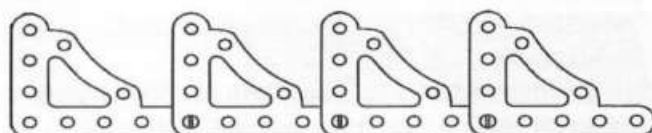
SPREADING PARTS: "The Meccano dealer's shop at Mill Hill on the Watford by-pass out of London was hit by a doodlebug during the War and there were Meccano parts spread everywhere. My parents would not let me go down there - something I have been thinking about for the past 60 years." (Lytton Jarman, Rugby, England, on "Spanner").

THE BUTTER CHURN: A Meccano butter churn sold on eBay for £382. One at a Christie's auction was in a lot with a GRB and the two sold for over £700. Chris Nicholson showed a photo on "Spanner" of his own 'priceless' one It was complete with a 1999 glass mint sauce jar from Tesco.

QUOTATION: "I used to swap my dolls for my brothers' Meccano sets. My dolls ended up having operations while I built cranes and water wheels and model aircraft." (from "Back Room Girl" by Donna Baker.)

"CANADIAN MECCANOTES": This magazine is now in full colour, all 28 pages of it. CMAMAS has bought an HP Colour Laserjet 5500 printer for producing its magazine. National Meccano magazines such as our NZFMM one have become excellent publications in their own right thanks to modern printing technology. From outside Canada, 'MeccaNotes' can (as previously) be ordered from MW Mail Order in the U.K. Furthermore, MW Mail Order accepts credit card payments.

ADVERTISING PAID OFF: In marketing 'Mechanics Made Easy', Frank Hornby spent more on advertising than on his staff wages. (from "The Toy Story" by Anthony McReavy).



Reference Information for Antique Meccanomen

The use of email from the Spanner group is acknowledged.

P/N 61 Windmill Sails

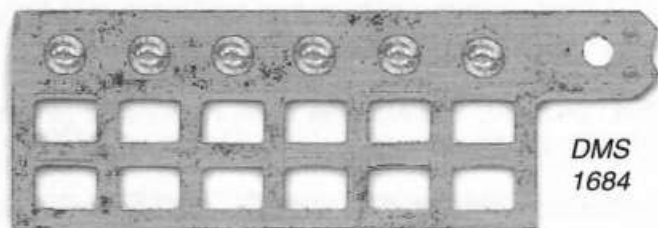
A collectors check list. Rev 2.2 15 March 2004.

DMS 1682 - Type 0 - 1912 - nickel plated - long stem with 3 rows of window cut-outs, none seen. Note: This was speculation at the time of DMS writing in 1972. Has anyone seen one?

DMS 1683 - Type 1 - 1912 - nickel plated - long stem - has 2 rows of window cut-outs-no dimples under windows. No markings.

DMS 1683a - as 1683 but in black finish.

DMS 1684 - Type 2 - 1914 - nickel plated - long stem - 2 rows of windows but has 6 "dimples" under the windows. Also has 2 small dimples between hole and bush wheel cut-out at the end of the stem. No markings.

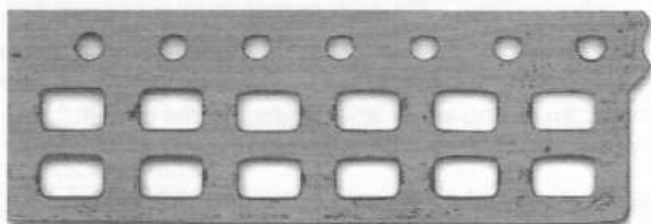


DMS
1684

DMS 1684a - as 1684 but in blackened finish.

DMS 1685 -Type 3 - 1914? - nickel plated - long stem - 2 rows of windows but the word "MECCANO" in block letters were the dimples would be. No small dimples, either, at end of stem.

DMS 1686 - Type 4 - 1923 - nickel plated - very small stem but now has 7 holes in place of dimples. Still has 2 rows of window cut-outs. Overall length is same as earlier ones but these appear as a rectangle. Marked Meccano only or Meccano + *fabrique en angleterre*.



DMS 1686

DMS 1686a - 1926 - as 1686 but in light 1926 red.

DMS 1686b - 1927-32 - as 1686 but in dark red.

DMS 1686c - 1934 - as 1686 but in royal blue.

DMS 1686d - 1934? - as 1686 but in gold?? - very speculative.

DMS 1687 -Type 5 - 1934-40 - single row of painted windows. Plain rectangle without stem of any kind. 8 holes under painted windows. Yellow (gold?) on blue background.

DMS 1688 - 1950?-57 - as 1687 but windows are light green on dark/medium green background.

DMS 1688a - 1957-63 - as 1687 but windows are very light green on light green background.

DMS 1689 - 1964? - as 1687 but yellow windows on black background.

DMS 1689a - as 1689 but windows painted on both sides has been seen.

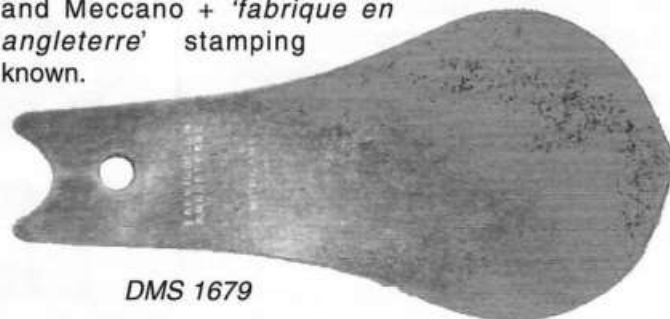
DMS 1689b - as 1689 but windows painted dark yellow on

dark blue background. Greg Rahn, Cochrane, Alberta, Canada, <gsrahn@shaw.ca>.

P/N 41 Propeller Blades

A collectors check list. Rev 2.3 12 March 2004.

DMS 1679 - 1st pattern wide type 1 - 1908?-23, nickel plated, single hole, no markings, single stamped Meccano and Meccano + *'fabrique en angleterre'* stamping known.



DMS 1679

DMS 1679a - type 1 - 1916/17? - 1st world war black finish - markings as 1679?

DMS 1680 - type 1 - 1923-26 - but now has 2 holes-nickel plated-markings as 1679.

DMS 1680a - light (1926) red colour - 1679 markings.

DMS 1680b - dark(1927) red colour - 1679 markings.

DMS 1681 - 1927-29? - Type 2 - narrow corrected pattern, dark burgundy all red (no green tip), single Meccano stamp on stem between holes on convex side typically.

DMS 1681a - light (1926) red with light green tip - 1681 markings. Note also that most type 2 propellers with painted tips have a distinct ridge near the tip. Probably used as a printing/dipping guide?

DMS 1681b - burgundy red with dark green tip - 1681 markings - concurrent with the all burgundy red ones?

DMS 1681c - 1927-36? - all nickel finish - usually special order - 1681 markings - no tip ridge?

DMS 1681d - 1930-32? - dark red with dark green tip - 1681 markings.

DMS 1681e - 1933-41 - colonial export med red with medium green tip - 1681 markings. Concurrent with 1934+ UK blue/gold ones! Could also be a one year (1933) issue in UK.

DMS 1681f - 1934-41 - UK domestic gold with blue tip - 1681 markings. Concurrent with 1681e.

DMS 1681g - 1945-57 - post-war medium red with medium green tip - markings are Meccano + Made in England now stamped on wide body of blade in 2 rows on convex side.

DMS 1681h - 1958-64? - post-war light red with light green tip - stamping as 1681g.

DMS 1681i - 1965-69 - black with yellow tip-stamping as 1681g - more common - note: that there is no ridge stamped near the tip as in the earlier ones. All black may exist as factory mistakes.

DMS 1681j - 1970-77 - yellow with black tip, stamping as 1681g - less common - Note: all yellow blades (missing black tip) have been seen. Probably factory mistake.

DMS 1681k - 1978-79 - yellow with blue tip - stamping as 1681g - very rare.

DMS 1682 - 1927-?? - Type 2 - narrow corrected pattern - found in burgundy red but in opposite hand!! Single Meccano stamp on stem between holes on concave side. May be other colours? Greg Rahn, Cochrane, Alberta, Canada, <gsrahn@shaw.ca>.

MWTT

MECCANO CLUB

Meeting Report 14 August 2004

The model challenge for the August meeting

was an Aeroplane (less than 12" wingspan) with a P/N 19b 3" Pulley somewhere in the model. 13 models were laid out on the table with most using P/N 19b as the base for the rod which carried the Aeroplane. Models varied from freelance to representations with P/N 27f Multi-purpose Gear Wheels as radial engines, Windmill Sails as tailplane, a P/N 19b as a to-scale radar dome, a square Canadian Beaver, Biplane

'Hope' from Malta 1940, a Cadbury Chocolate replica with the propeller driven by a mini electric motor from a mobile phone and one AA battery, etc. Other models presented were:-

A differential by Don Blakeborough. Full size child's scooter weighing in at 6kg and demonstrated by the intrepid test pilot Selwyn Bluett weighing in at 70kg. John Freer had a two cylinder reciprocating steam engine with water pump, flywheel and using single and triple Eccentrics. John also had a mobile Crane built from a combination of the newer sets and new Meccano parts. Bruce Geange showed what could be done with electric motors from CDRoms by making a 0 gauge jigger running on Hornby track. John Ince with

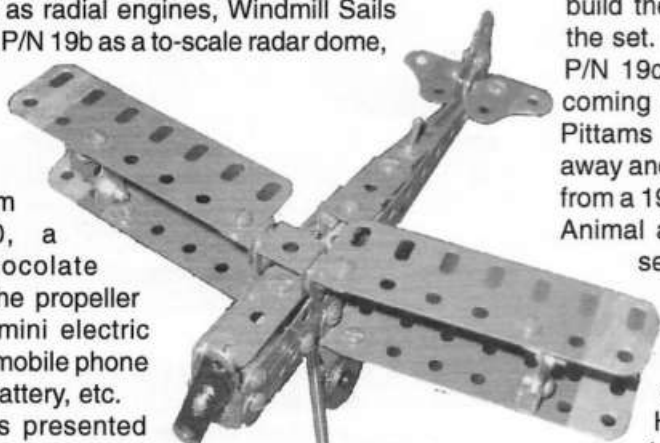


photo by Bruce Geange



photo by Bruce Geange

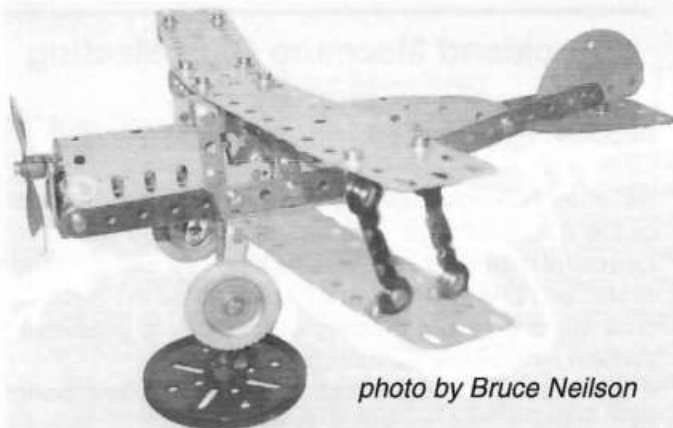


photo by Bruce Neilson

the 2004 catalogue in hand proved that you can build the Eiffel Tower very easily without buying the set. Bruce Neilson has finally found a use for P/N 19c 6" Pulley by using a 78rpm motor and coming up with a revolving display stand. Tom Pittams had the ubiquitous Unicyclist pedalling away and a three forward and one reverse gearbox from a 1932 MM. Paul Vodanovich had his Walking Animal and Helicopter from the Master Builder series in action. Lloyd Spackman produced a Bulldozer and Excavator from the current Future Master model set with track drive and new type wheels with very chunky tyres for realism.

Hugh Ramage repairs sewing machines for a living and had set himself a challenge

to build a working Meccano model of one of his machines. He demonstrated a magnificent working

model of a Bag Sewer complete with a very sharp needle and samples of made-up bags. The group were also able to identify a Brimo Mk2 horizontal steam engine for Hugh. Sales of parts and sets, and an extensive auction sent most members home with less money and more parts.

The AGM voted in for second terms, Bob Prescott as President and John Hansen as Secretary/Treasurer.

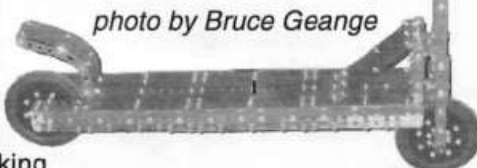


photo by Bruce Geange

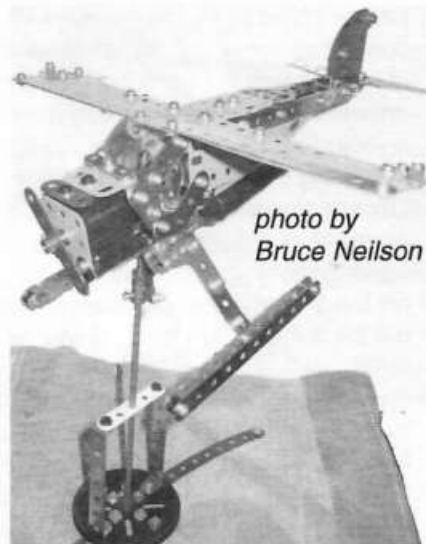


photo by Bruce Neilson

<< Hugh Ramage demonstrates his bag sewer

Auckland Meccano Club Meeting Report

Reporter: Peter Hancock

Saturday 14th of August was a very special day in the history of the Auckland Club and we were blessed with a large turn out of members and partners when we met at the home of Neil and Eileen Carey, at 23 Eaton Road in Hillsborough on a rather cold and blustery winters day to celebrate the thirtieth birthday of the founding of the Club.

It was most gratifying to see that members and partners had made a special effort to be present for this most auspicious occasion. The larger than normal turn out (18 members and 9 partners) meant that space was at premium. However we still managed to find room to set out all the models and memorabilia that had been brought for display.

It was pleasing to note that the attending member's ages at this meeting ranged from nearly teenage to seniors, several of whom have for various reasons found it difficult to attend meetings over recent months for health and other reasons but who had made a special effort to be in attendance at this event, yet again confirming that MECCANO continues to have a special and timeless ability to appeal and motivate both young and old alike.

The models displayed showed of to good advantage the extensive range of parts that is currently available to modellers everywhere, ranging from those produced in the first half of last century through the various eras up to and including the latest models currently available which include items made from 'memory steel'. With such an extensive range of parts now available, we are all looking forward to viewing the models currently being prepared for the competitions and general display at 'CONVENTION 2005' next Easter.

After spending some time in general discussion and review, the members found time to consider the serious business of the day which include a review of general management and housekeeping items before moving onto reviewing what had occurred at the display that members had mounted and manned over the three days of Queens Birthday weekend at the MODEL X Hobby show held at Henderson. We had just received a cheque from the MODEL X organising committee for which we are most grateful, given to us in recognition for our continuing participation in this annual event. The treasurer will ensure that the money is included in the funds that we have available for the mounting of 'CONVENTION 2005'.

On conclusion of the business items we shared a moment of reflection in memory of one of our longer serving members, Bob McCracken who passed away on the 7th of June. (An obituary for Bob McCracken will be published in the NZFMM Magazine December 2004).

It was then time to try to photograph the birthday cake that Elizabeth Wall had prepared for the occasion along with several of the founding or longer serving members. President David had assisted Elizabeth by supplying various MECCANO parts (which he insisted we took great care not to damage with Elizabeth's special cake knife when cutting the cake) to act as a mounting for

the special balloon that had been affixed.

Finally, we managed to take several shots after a great deal of hilarity had occurred and many helpful and some not so helpful suggestions were provided to David as he tried very hard to arrange the way that the balloon faced for the camera. We hope one of the photos will be considered good enough by our venerable editor to be included with this report to show the beautiful chocolate cake that was quickly dispatched along with all the other party food that had been prepared when everyone tucked into the sumptuous afternoon tea.

President David was the master mind in 1974 (and the longest serving member attending on the day) who arranged the first Auckland Club meeting. In his speech David said that at that time he thought that it could be possible that the club might survive for a year or two and continues to be amazed that it is still going strong after thirty years.

Members noted that there is a wealth of years of modelling experience within the current club membership with George Ovenden (joined 1976) Ray and Gary Forster (joined 1981) Neil and Graeme Carey (joined 1981) Graeme Wrightson (joined 1983) just to name a few. We took time to remember those who have passed away or have shifted to other clubs throughout the country.

Members reluctantly closed the meeting at 5.00pm after having shared a special time in the history of the Auckland Club and making yet another 'milestone' in the history of MECCANO here in New Zealand.

The next meeting will be held at the home of David and Elizabeth Wall on Saturday the 13th Of November at 45 Kath Hopper Drive, Maygrove, Orewa, Auckland



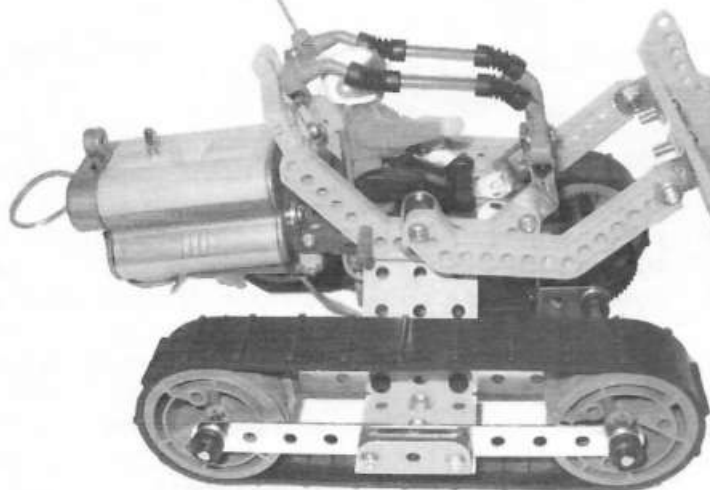
The Cook, the President and a Witness deal with the cake! (In other words, Elizabeth and David Wall with George Ovenden.)

Wellington Meccano Club

August Meeting

by Lloyd Spackman

Ten members were at our August meeting and enjoyed viewing a variety of models and literature.



Lloyd had his bulldozer from a Future Masters set 7600 trundling along on its rubber tracks.

Simon brought the commutator as well as the massive driver's cab and motor house for the Stothert & Pitt D22 crane model which he is building. It was also fitted with a little Hennikwell 320 rpm motor for driving the hoisting mechanism.

A welcome visitor was John Ince who demonstrated two of his Meccanographs. Using a picture from the new 0513 Eiffel Tower

Construction set. John had built it using his own stock of parts.

Lou showed us his aeroplane entry for the MWT Club competition - a very nice looking "Spirit of St. Louis".

The Ferris Wheel Set No. 8258 donated to the Club by Rainbacryl Ltd. was inspected and members decided to keep it as a Club asset and pass it around those who wished to build and display some of its 23 models. Meeting venues were also discussed and members decided to continue meeting at Konini School, Wainuiomata in the meantime.

October Meeting

by Lloyd Spackman

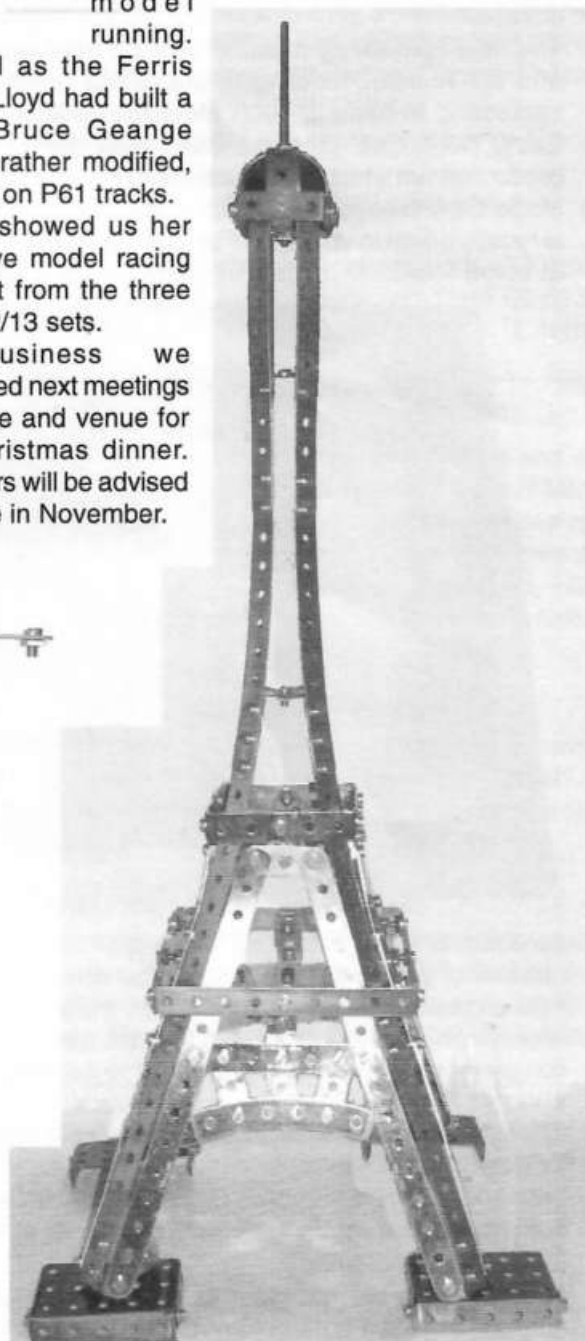
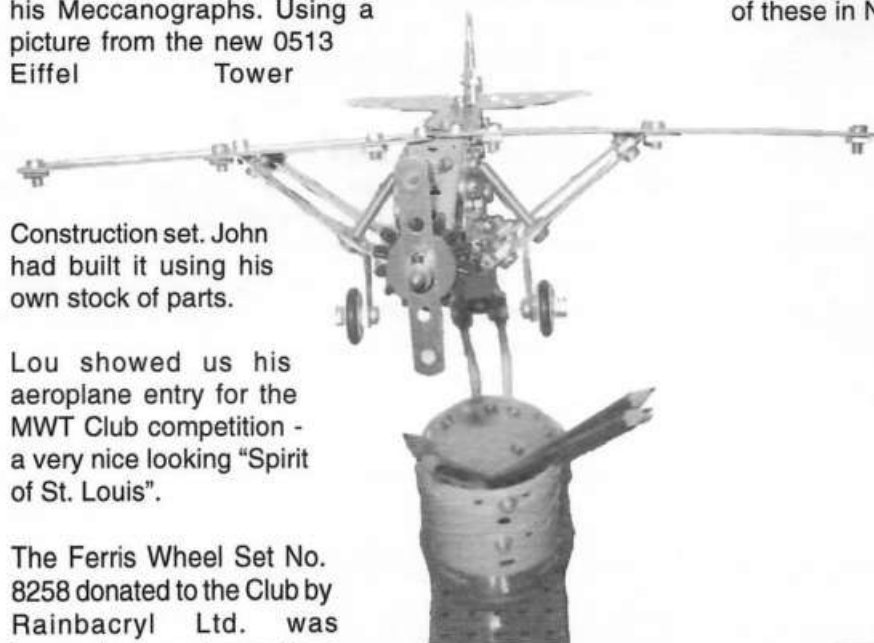
This meeting was delayed a week because of venue problems so some of our 'regulars' were not present. However, we had a good meeting and welcomed Tim Surtell who is a member of the South East London Meccano Club. Tim will be in NZ. for a while so we hope to see him often.

For models, Lloyd brought the built-up Ferris Wheel from the Club's 8258 Set. It runs well on two AA batteries and is now being built again by Nancy and Bryan.

Laurie Webb, back from Western Australia, brought a small windmill driven silently by a 40 rpm Hennikwell motor.

Simon has built the four feet for his S & P crane; two will be motorised. The feet are quite heavy in themselves. He also had a Konkoly Centrifugal Intermittent Motion model running.

As well as the Ferris Wheel Lloyd had built a small Bruce Geange tractor, rather modified, running on P61 tracks. Nancy showed us her attractive model racing car built from the three 2511/12/13 sets. In business we discussed next meetings and date and venue for the Christmas dinner. Members will be advised of these in November.



This time let's take a trip back into Meccano's history and look at some items we rarely see let alone buy.

First up a Geared Roller Bearing. Now I have seen a number of these, some boxed. This sale item is not boxed, grey in colour and includes the pinion. In very nice condition and sold really well at approx. NZ\$1000.

Next up is a very nice Hornby No 1 Speed Boat. This lovely boat is in excellent condition and includes the original box in very nice condition. The boat is complete (including plastic windscreen), has all decals and clock work just works fine. The boat is cream and red in colour and sold for a very reasonable price of NZ\$440. A great investment.

A K Type Oil Can has featured in these pages before and they always sell well. This example looks in very good condition and sold for NZ\$480. They are not getting any cheaper!

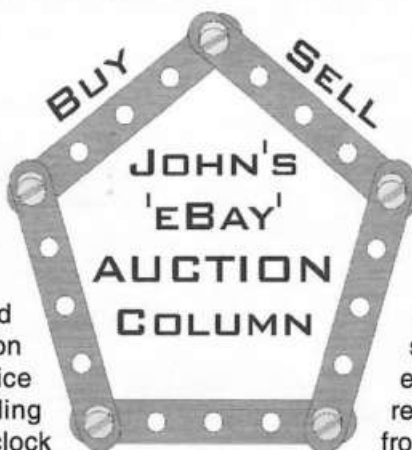
The next item surely must fall into the very rare category and the number existing in the entire world would be interesting to know-a 1908 Meccano (Mechanics Made Easy) No 1 Set. This set was made during the 1908 production run which was much shorter than the Mechanics Made Easy production run which lasted 6 years. The box is mostly green in colour and shows a boy and girl pointing at some Meccano models in the centre portion. The box



condition is very good for its age and I counted up the number of pieces of Meccano in the box and excluding nuts and bolts it came to less than fifty pieces. After-all this is only a No 1 outfit. The contents are very substantially complete, parts missing are: 1 x No.1, 2 x No.2, 3 x No.5, 1 x Wood Screw. The screw driver was definitely from a different period. The Manual looks very nice and tidy-correct for set. Sold for NZ\$2400.

Let's now look at a very nice Dinky Fire Truck The model itself is in like new condition as is the box. Made in France (No 32E). Sold for NZ\$660.

The next item did not meet its reserve and I would not normally include it in my column but I think it holds a general interest to us all. I will let the seller describe the sale item"



This collection came from an education foundation and was used by college age students. Most of the parts and cases are in excellent to unused condition. The collection is made up of nine No 10 Meccano cabinets and two homemade three drawer cabinets. Three four drawer sets date from the late 1950s to mid 1960s. One of these sets has a drawer front missing. Most parts in these sets have been used, but are in good to excellent condition. Most of the parts are red and green. Two four drawer sets date from the early to mid 1970s. These cabinets have a light oak finish. The parts are blue and

yellow. Most of these parts are unused. The last four No 10s are three drawer cabinets dating from 1978 to 1979. Again these parts are in excellent to unused condition. The two homemade three drawer cabinets were used by the former owner to store extra parts. These cabinets are stuffed full of parts. One of these cabinets has a drawer for gears with one pocket containing twelve sets of Helical gears. All parts are Meccano, Liverpool manufactured. I have not yet inventoried these cabinets because I don't know the exact year of manufacture and have no reference material to do an exact inventory. From rough count of parts it does appear that these sets are complete. Many extra parts are in the home built cabinets. There is a pile of special model leaflets and instruction books, eight inches high stack". How would you value this lot. The final bid price was approximately NZ\$18500 and this bid was below the reserve. The reserve price could have been twice that amount?

Now for something completely different. The late Dr Keith Cameron designed and built a clock which he called the Krazy Klock-a really neat model. This eBay sale was for a completed model of the above and it looks really nice in the colour scheme they have used. Sold for NZ\$500 which is quite reasonable if you were to go and add up the parts that are in this clock.

The next set we are looking at is a very nice 1935 Ea Accessory set. Missing a few minor parts the rest are in as the seller states "unused state". Box and inserts look fairly good but no manual. A nice item and good buying at NZ\$220.

My second to last item is not very big. It measures 145mm wide and 50mm high on 120mm metal post. It is green and has Meccano written across it. The Meccano flag came out in the 1930s and are not that common. This one sold for NZ\$120.

To finish with this time I am including a item which has nothing to do with Meccano (it may do distantly) but is still a very nice toy. This toy is a train set made by Bing in the late 1880s and was designed to go on your table. The set consists of a locomotive, three passenger coaches and sixteen pieces of track (four straight and twelve curved) to make a layout 3.5 feet by 2.5 feet. Made by Bing Bavaria the set is in its original box (nice) and comes with original brochure. Train and carriages are dark red and black in colour and look to be in great condition. Set is missing the train key! Something special here-and sold well.

Until next time, keep up the modelling and collecting.
<jc.hansen@ihug.co.nz>

New Zealand Club Diary 2004

Auckland Meccano Club.

Contact - David Wall - Ph 09 426 1965.

Meetings at 2 pm on second Saturday every third month.
2004 - 13 November.

2005 - 12 Feb, 14 May, 13 August, 12 Nov.

MWT Meccano Club.

Contact - John Hansen - Ph 06 325 8211.

Meetings at 2 pm on second Saturday every second month
at St. Luke's Church Hall, cnr. Cornfoot and Manuka Streets,
Wanganui.

2004 - Xmas dinner 27 November, Hawera.

2005 - 12 Feb, 9 April, 11 June, 13 Aug, 15 Oct.

Wellington Meccano Club.

Contact - Lou Nichols Ph 04 973 6177.

Meetings at 7.30 pm on first Friday every second month at
?? (contact Lou to get place of meeting).

2004 - 3 December.

2005 - 4 Feb, 1 April, 3 June, 5 Aug, 7 Oct, 2 Dec.

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.

2004 - 5 November, 3 December.

2005 - 4 Feb, 4 Mar, 1 April, 6 May, 3 June, 1 July, 5 August,
2 Sept, 7 Oct, 4 Nov, 2 Dec.

Additional Meccano Contacts

Hamilton - Don McClelland Ph 07 847 4503.

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>.

Articles etc. for the December 2004 issue of NZFMM Magazine should be sent to the Editor well before 15 November 2004.

Back Numbers - NZFMM Magazines from April 2001 are available. These are printed to order and delivery will be up to six weeks after payment date. Contact the Editor.

The 1908 No 1
Manual of
Instructions
referred to in
ebay on page 22



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.

For Sale - Meccano Parts and Sets

Meccano have recently released a number of new sets, and we can supply these to NZFMM members at a discount to retail prices.

As part of the Design range, Meccano have introduced "Design Starter Models" which are merchandised in a counter top display box of 24 boxes (4 each of 6 designs), each box retailing at \$14.95.

See <http://www.meccano.fr/produits/gamme_design/design.php> for the designs. We are offering 1 of each of these six designs as a set, to ensure that you can get one of each design. These also make great presents for children's friends and grandchildren!

All of the sets on the list are currently available, with the exception of the M0511, M0512 and M0513 (which have sold out) and the M8700 Design 4x4 Remote Control. These will all be available around the 20th October.

We accept Visa and MasterCard, cheques, cash or direct debit to our bank account.

To make it easy, shipping is at one fixed price (depending on region), regardless of order size.

Contact Andrew & Vivien Wells, MeccParts.com, PO Box 26179, Epsom, Auckland 1003, Phone (anytime) 09 523 4447, Free fax 0800 MECCANO, Email <andrew@meccparts.com>.

For Sale - Meccano Supplies.

New Design series sets. 2 Helicopter, 3 Motorbike and 4 Car are now available. Discounted by 15% for NZFMM members. Special offer for this issue of the magazine is Set 0507 Special Edition Train set, \$200 post free. Contact Wayne Blakely, Meccano Supplies, Patikipapa Road, RD 1, Marton. Phone 06 327 6184, Fax 06 327 4184, New email address <info@meccanosupplies.co.nz>.

For Sale - Exacto Range.

To order Exacto parts, contact Wayne Blakely, Meccano Supplies, Patikipapa Road, RD 1, Marton. Phone 06 327 6184, Fax 06 327 4184, New email address <info@meccanosupplies.co.nz>.

For Sale - WMC and NZFMM Magazines.

Wellington Meccano Club 1978. \$10 complete year and 50c per odd issue plus p&p. NZFMM 1979 through to 1985. \$15 complete year and \$1 per odd issue plus p&p. For a complete list, please email Don Blakeborough at <d.blakeborough@clear.net.nz>

Wanted to Buy- NZFMM Magazines - All Years.

Selwyn Bluett, Hawera on <selwyn@hondafarmbike.co.nz> or phone 06 278 4420.



Simon Johnson discusses his blocksetting crane on page 3.

Doug Harris has reproduced a couple of posters which are illustrated here. Read more about the posters and where to get them on page 15.

