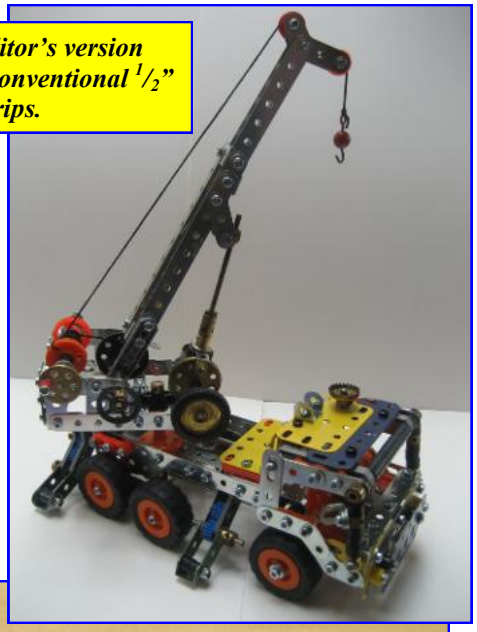
NZFMM MAGAZINE

Volume 37 No. 4 November 2013

The new Evolution Crane-Truck at full luffing and showing the new Narrow Strips with 1/4" hole spacings.



The Editor's version using conventional 1/2" wide strips.

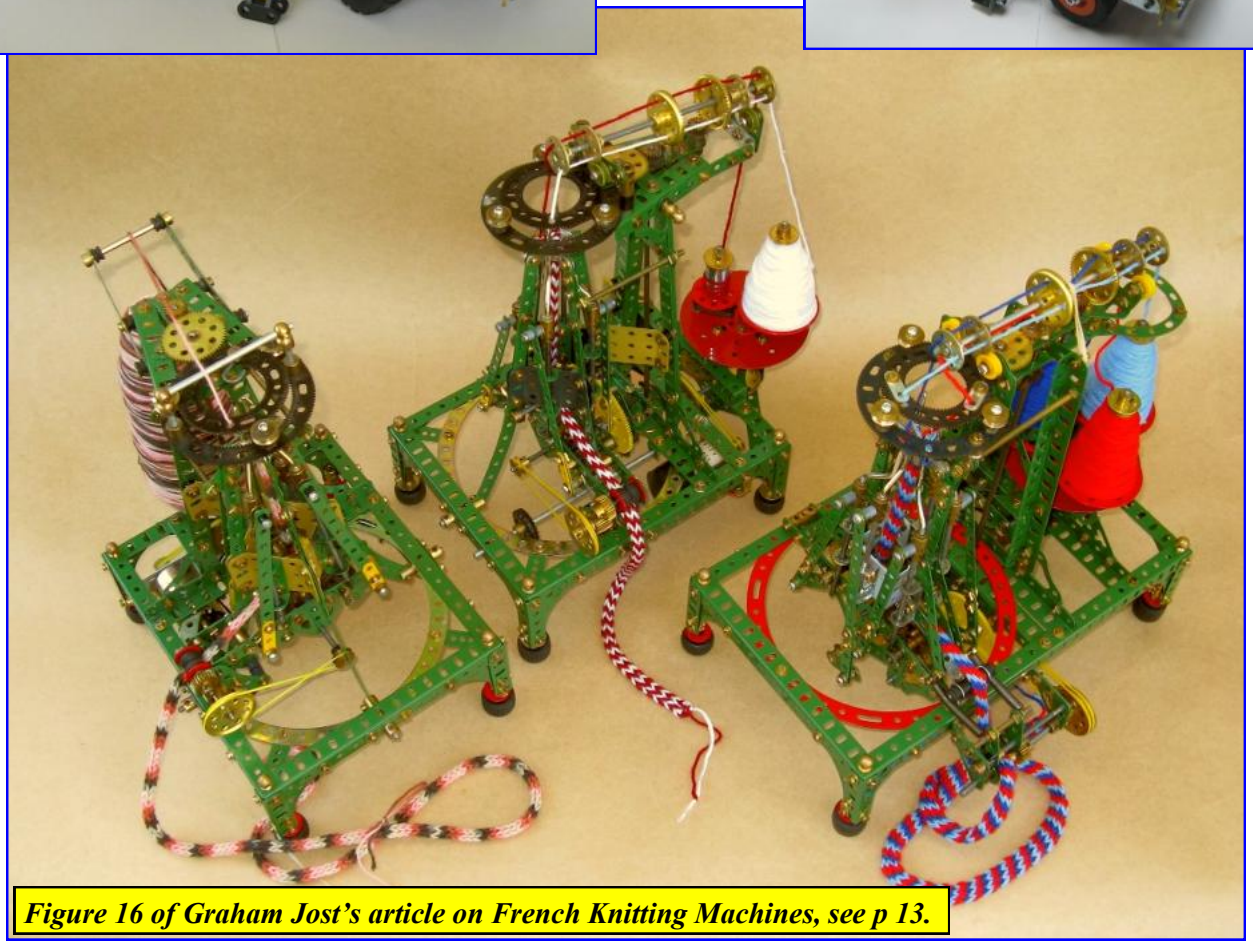


Figure 16 of Graham Jost's article on French Knitting Machines, see p 13.

Published by The New Zealand Federation of Meccano Modellers

Volume 37, No. 2
NZ Federation of Meccano Modellers Magazine

Editor: Les Megget
231 Opaheke Road, RD4
Papakura 2584
Phone: 09 299 6668
Email: l.s.megget@slingshot.co.nz

Proof Reader: Bruce Geange
4 Winchester St., Palmerston North 4412
Email: a.b.geange@inspire.net.nz

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

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

Subscriptions are payable annually in March. Please send to Bob Prescott, 16 Watford Drive, Paraparaumu 5032, New Zealand.

Email: bobandanne@paradise.net.nz

Any queries or quotes for other currencies email Bob.

Personal cheques or Bank Drafts accepted from most countries. Please make payable to **"NZFMM Magazine account".**

Subscription Rates (pa):

New Zealand: $32; pdf version only $10.

Overseas: AU$28; CAN$32; US$32; GB£20; EU€24.

Electronic pdf: AU$8; CAN$9; US$9; GB£6; EU€7.

NZFMM Website:

The address is http://www.nzfmm.co.nz or http://nzfmm.co.nz The joint web masters are William Irwin and Gary Higgins. They can be contacted at webmaster@nzfmm.co.nz on NZFMM website matters.

A New Evolution, well not really!

Over the last couple of months I've been building the 5 new *Evolution* models recently released by Meccano-France. They are certainly a lot better than some of the recent sets, including the *Tintin* series and the *Rabbids* lot. There are plenty of new parts, many of them metal Narrow Strips with holes at 1/4" centres. These will be useful for us builders I'm sure, but in my view were hardly justified in these new sets; conventional Narrow Strips would have sufficed in most cases. The instructions are quite hard to follow because of the gloss printing where black parts attached to other black parts can't be easily distinguished. I like the crane-truck model best but the motorised Rescue Helicopter goes well and looks the part but the battery boxes could be redesigned so you don't have to undo several bolts to replace some of the batteries. Some of the new plastic parts are good, the crank with a gear moulded into one end and the plastic bevel gears will have their applications in other models. The plastic pseudo hydraulic cylinder is a good idea but it needs an increased length and stroke to be really useful. Have you ever seen a hydraulic mobile crane that luffs to only 40 degrees to the horizontal?

Meccano has recently been purchased by Spin Master Ltd of Canada. See p25 for the details of the company, thanks to Anthony Els of the *South African Meccano Club*. Whether this will mean more electronics, less plastic, or bigger sets we don't yet know but there could be a whole new approach in the near future.

I hope you all have a restful and enjoyable festive season and hit the new year determined to use your Meccano in which ever way you wish, even if that is just looking at it.

Don't forget the March Madness meeting at Taupo on the 8th March. Details of the planned competition can be found on page 17.

LM

Contents

Mini-MAN Truck & Palfinger Crane

by Les Megget

This small model (Fig. 1) was "run up" over a weekend before the Easter Convention as a comparison with my 1:9 scale MAN 6x4 truck with Palfinger crane.

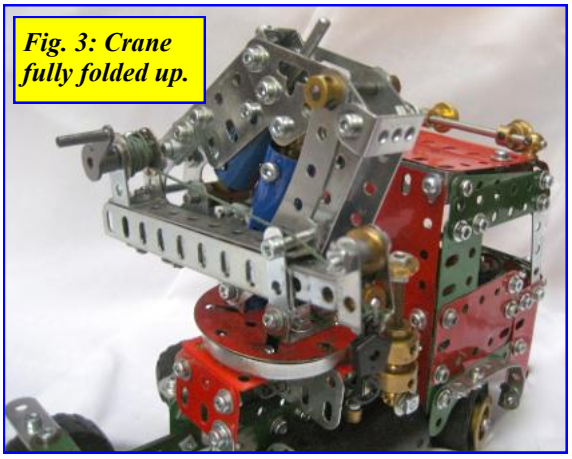


Fig. 3: Crane fully folded up.

The chassis is an extension (22-holes) of the earlier 1950s recovery truck, which I described in an earlier issue, see Fig. 6.

The roller bearing is Ball Bearings running in a Wheel Flange (with several Wheel Disks internally) fixed to a support structure bolted to the chassis cross members. The top of the bearing is a Face Plate to which the crane superstructure is bolted using two 1" by $^1/_2$" Double Angle Strips.

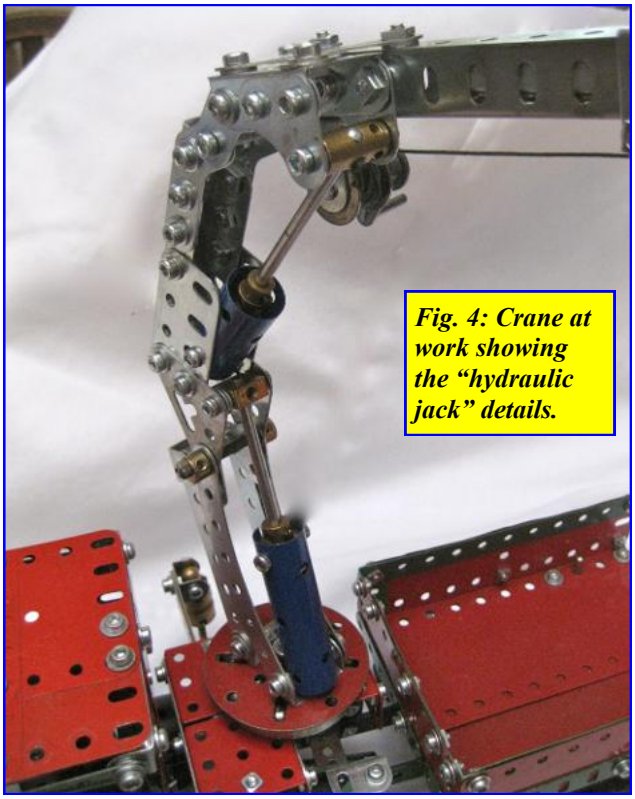


Fig. 4: Crane at work showing the "hydraulic jack" details.

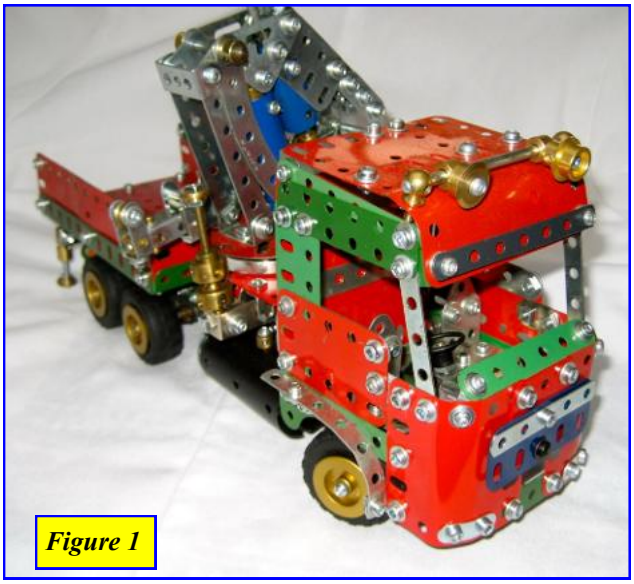


Figure 1

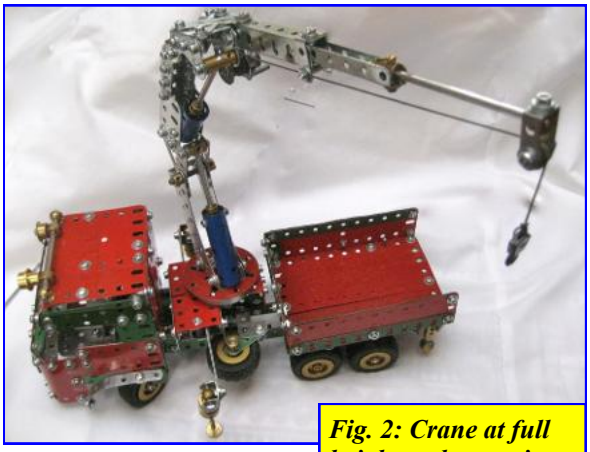


Fig. 2: Crane at full height and extension.

The bearing is kept together with a 1" Bolt passing through the bearing's centre with a Nyloc Nut on the bottom.

The crane's superstructure is straight forward and can be seen in Figs 2-4. The lifting cylinders (long and normal length Sleeve Pieces) have a Socket Coupling bolted inside them through which an Axle Rod (the piston rod) slides. A Grub Screw in a Short Coupling in the outer socket of the Socket Coupling is fixed to hold the crane arms aloft. A better system using Threaded Couplings and Screwed Rods being driven by Small Contrates and Pinions could be devised.

The upper crane arm is made from two 9-hole Angle Girders forming a box section with 2 Narrow Angle Girders (as a C-section) sliding in them. The third section is an Axle Rod sliding in a Short Coupling bolted at the end of the 2nd section and is fixed in position by tightening a Set Screw in the short coupling. A Narrow 2 by 1-hole bracket holds an obsolete $^1/_2$" Pulley over which the hoist cord runs.

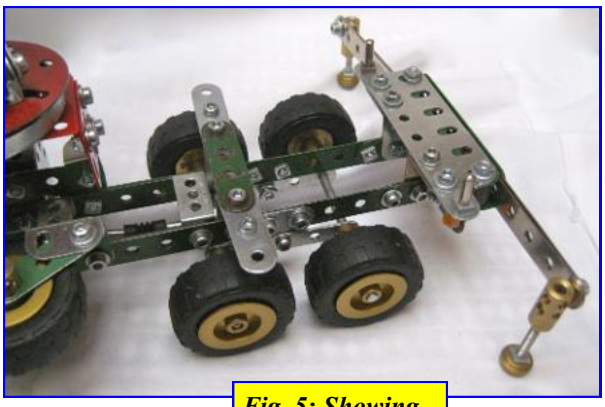


Fig. 5: Showing rear stabilisers.

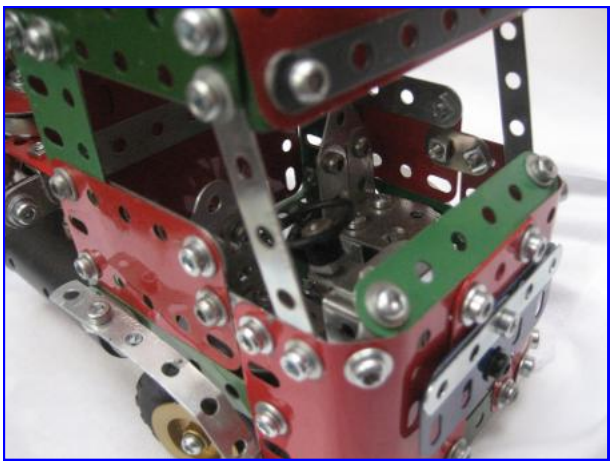


Fig. 7: Cab exterior and interior.

The front stabilizers are a pair of 7-hole Strips which extend out from the crane support structure. The guides are 6-hole Angle Girders with vertical bolts with 2 Plastic Collars to restrict the horizontal movement of the stabilizers. The actual stabilizers are Handrail Couplings able to rotate on 20 mm Bolts bearing in a Double Bracket fixed to the end of the 7-hole Strips. The boss of the Handrail Support is fixed into a Socket Coupling, which has a Threaded Boss in its lower socket. A 30 mm long Screwed Rod with a small Pulley as the bearing plate can be lowered to ground level to represent the stabilizer.

The rear stabilizers are similar to the front ones but don't need to be rotated into the vertical position when not in use. Threaded Couplings are fixed to the end of the 7-hole Strips into which the 30 mm Screwed Rods can be raised or lowered, see Fig ?.

The truck's tray can be removed from the chassis and is held in place by 2-Threaded Pins fixed in a cross-member at the rear of the truck.

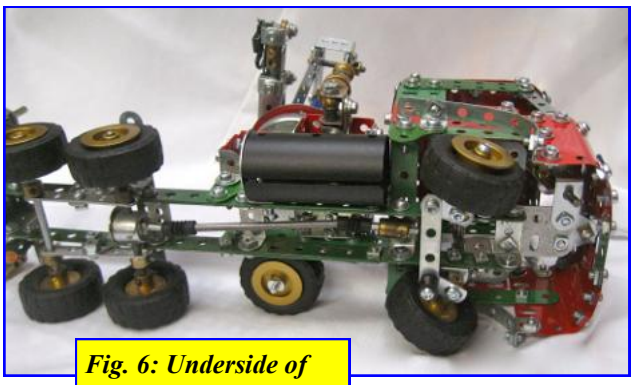


Fig. 6: Underside of truck showing steering and rear suspension.

The steering will work but I hadn't connected the steering arms to the steering wheel shaft when the photos were taken. The seats are 2-hole Flat Girders with two 1" by 1" Angle Brackets with a 1" Triangular Plate as the seat back. Each seat bolts directly to a chassis rail by means of a 1" by $^1/_2$" Angle Bracket.

From Rick Vine (from the *Ponsonby News*):

ARTS + CULTURE

JOHN LYALL: MOA MOA MOA

September 10 - 29

Artist John Lyall's preoccupation with the moa started on the first day he arrived in New Zealand from his native Australia, in 1983.

On that day a BBC team was in New Zealand, filming a Japanese moa-hunter in Fiordland, who, convinced the birds were not extinct, had made a sounding device supposedly replicating the moa's voice.

The tale of unrequited love was explored in Lyall's "cyber-opera", Electronic Moa, performed at the Hopetoun Alpha in 1999, and he followed that with his exhibition of moa drawings, A Moa, a Math, a Mount at 40 George Street Gallery in 2002.

He has since constructed numerous moas out of old Meccano construction-set parts, and in an exhibition in the ARKO Gallery, Seoul, South Korea in 2010, he displayed photographs of a moa tattoo, a moa skeleton (photographed in the demolition rubble of Auckland Museum's bird hall), a 1.6m high moa made from vintage Meccano parts and a fibreglass moa he had spotted, oddly, in a Seoul bakery during an earlier visit.

Over many years Lyall's multi-disciplinary practice has included sculpture, photography, installations and video, and he has even branched out into designing rugs for Dilana - in the shape of his beloved Meccano pieces.

Lyall's exhibition Moa Moa Moa will bring many of his earlier moas together, along with new ones, including a flickering moa made of LEDs, and a Caucasian Moa - a small Meccano moa all the way from Georgia. PH

WHITESPACE, 12 Crummer Road T: 09 361 6331 **www.whitespace.co.nz**

Manufacturing Gears: by Jeff Clark

Part 1: Helical Gears

This article explains how I got involved in the manufacture and production of Brass parts and started a business called "Meccgear". It also describes some of the interesting and at times frustrating peculiarities with Meccano Gears.

After deciding to revisit Meccano after a 35 year hiatus, I could not resist acquiring gears. At first I purchased sets and bulk lots as we all do. But found the supply and quality was marginal at best. As I come from an engineering background, I decided to invest some time into the prospect of manufacturing a small quantity of parts for my own use using my various contacts.

Helicals were my first priority as I felt there was a definite lack of choices. Starting with the 211a and 211b, I set out to look at the teeth profile and spacing with a view to manufacturing other ratios. Now, we all know that the 211a is a 14 tooth and the 211b is a 35 tooth. Ratio is 2.5:1 and they mesh at 1" centres. So taking the DP of the combined pair gives us (14+35)/2 or 24.5 teeth per inch. That isn't that good to start with as it is an odd arrangement, what's worse is that both gears themselves are slightly different. Measuring many sets the actual values are in fact different for the two pieces, the 211a is above the 24.5 and the 211b is under the 24.5.

This raised the first issue. Should I copy the mistake, and where do we go from here? As making further combinations needs to be made to some standard or nothing will mesh with anything cleanly. You end up with pairs of gears and another mish-mash of Meccano mythology.

So the decision was to adopt a 24 tooth per inch standard and manufacture the original 211a and 211b as a strictly "Meccano Replica Set". A lot of people ask me whether the new gears will mesh with the originals. They will, it's only an issue of calculation of the spacing; the new gears make this very easy. The tooth profile is exactly the same.

A simple way to look at spacing is this, taking a 48 tooth helical and a 24 tooth helical has a 2:1 ratio. Add the 2 gears together, this gives the total number of teeth. Divide by 2 as we only want the distance from the centre of one gear meshing to the other, then divide by the 24DP (24 teeth per inch). You get:

(48 Tooth + 24 Tooth) / 2 = 36
Therefore spacing = 36 / 24 = 1.5"

So the exact meshing distance will be 1.5". You can apply this to all Meccgear Helicals (excluding the 211a and 211b). So the decision was made to adopt the 24DP standard, which in fact, is what *Exacto* ended up with, as I found out later.

Helicals have some good advantages over standard pinions as they run smoother and using a Left hand with an equivalent Right Hand you can create herringbone meshing set ups.

So, the next step was to generate the drawings for the various Helical gears. This was done using *"Solidworks"*, a CAD package. We created all the various models we thought would be useful and built "virtual" models in 3D, checking for meshing, fit and feel. This work was completed at Waikato University School of Engineering with Cameron, one of the 3rd year graduates.

I also made the decision to manufacture a 211a and 211b that adopted the correct 24dp standard. This can be achieved by deducting 1 tooth from the 211a and manufacturing both gears to the correct 24DP standard. The numbers speak for themselves:
(35 Tooth + 13 Tooth) / 2 = 24
24 / 24 = 1" spacing.

These were named 211a NV (New Version) and 211bNV (New Version). These however give a 2.69:1 ratio.

So it was decided to make the following: 12, 16, 24, 32, 36, 40, 48 and 60 Tooth versions. All are available in Left and Right Hand variants with the exception of 48 and 60, which are only available in Right Hand.

The decision was also made they would be machined from solid brass, rather than cast or from 2 pieces. The 2 piece method presses the collar into the gear, this can result in the collar not being exactly square with the teeth.

Some would consider the billet method wasteful, but manufacturing from billet means the gear is one piece and dimensionally very accurate. The waste is recycled.

Undercutting the flange face on the 36, 40, 48 and 60 tooth versions reduces the rotating mass. Holes are machined at 1" and 2" diameters for cranks, etc.

Manufacturing the pieces was straight forward, as I have a number of firms that contract to me with the right tools for the job. However, this is where things took a turn. In manufacturing it's all about numbers. The set up time is the same for 1 piece as for 1,000 pieces. I chose to use 4 axis milling machines, where we could just feed our info and material in and the gears come out the other end. This is the most accurate and consistent way to make gears, human error is eliminated.

So I guess this was the day Meccgear was born. As the numbers to make it all work were quite large, the first run was around 12,000 pieces, yep that's not a typo. Also, yes, I have a VERY understanding wife.

When completed and deburred, I decided on an Acid wash finish, rather than a shiny surface, sure you can polish the gears your self, but the acid finish gives a more durable and longer lasting finish.

I also decided to manufacture Allen Head grub screws, for two reasons. Standard slotted grubs

Pictured above 2 finished 60 Tooth RH Helicals.

Note: The copy of the Meccano 211b Meccgear make has 6 holes machined into it, This stops people passing these off as genuine.

"open up" if you tighten them too hard and form cutters, which will over time make the threads in the brass parts loose. The other is purely selfish, I don't like scratches, remembering back to my childhood, there were

211d 12 tooth Helical, 2 of these give exact ½" spacing for 90 degree shafts.

48 Tooth and 24 Tooth Helicals.

plenty of times the screwdriver slipped while over tightening and my hand or the piece ended up with a chunk out of it. The Allen head, can be tightened over and over with out damage to hand or threads.

So the Helical gear situation was mastered. I now had boxes and boxes of Helical gears. What to do next? Lets have a look at the Bevel's. I will save that for the next instalment.

Jeff is a member of the Auckland Meccano Club and Owner of *Meccgear,* manufacturing Brass parts for the Meccano Enthusiasts. He can be contacted at sales@meccgear.co.nz

Auckland Meccano Guild Meeting

10th August 2013

Reporter & Photos: Gary Higgins

The meeting took place at **Neil Carey's** residence in Hillsborough.

David Wall had cleverly built up a bulldozer around a No 2 clockwork motor which ran very effectively.

Gary Higgins had brought an almost complete Märklin 1013 set from 1971-73. He has bought a few of these sets, which have parts very similar to Meccano and he also had a made up Crazy Inventor's helicopter.

Les Megget had a very nice model of a Austin-Healey 3000 car which was, as expected, astounding. Les had made use of the flexible strips in the Tintin Galleon set to fabricate the sidewalls and doors of the car. The use of special wire-wheel rims and tyres (I presume from *Ashok*) finished off the look of the vehicle. Les also had a cut away diagram of the vehicle which would have been a great guide during construction. I did see Les buy an Eagle comic book of cutaways, which he is no doubt looking at for further inspiration. What about the cranes Les? (Ed. No problem Gary, another crane is on the drawing board).

Henry Porter was not expected to be present as he had been in hospital but he had encouraged **Graeme Mills** to bring along Henry's models of a steam powered car, an alien vehicle (you have to see it to appreciate it), a nicely made grader featured in Meccano Magazine, an unusual device which consisted of a horizontal rod moving a rotating large rubber screwed cone in and out (my goodness Henry must have a nightmarish imagination and a racing car made from using a small diecast model as a prototype, complete with gullwing doors which worked well. Henry arrived during the meeting having escaped from Hospital and looking his usual self.

Gerald Hart had made up a very nice working model of a Corliss horizontal steam engine which showed off the working valve gear a treat. He had built it to show Henry how it should be done!
Gerald also had a great model of twin disappearing guns complete with a shield that could be raised to hide the guns and effectively make them disappear. This model was illustrated in one of the later Meccano Magazines. Gerald had built a lovely model of an early aircraft, a French Voisant which relied on a pusher propeller situated behind the pilot.

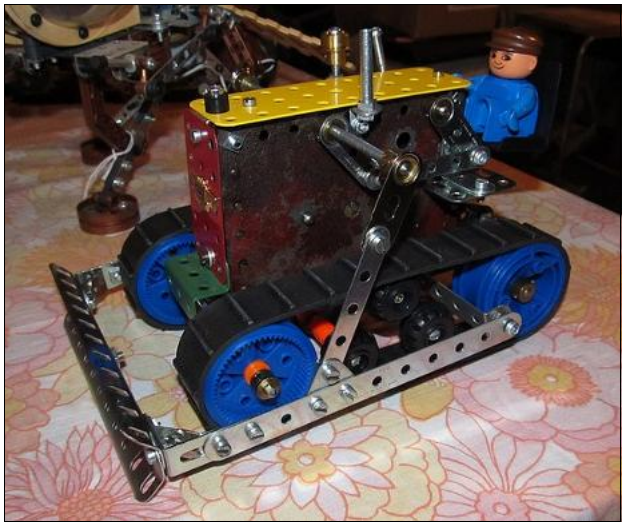
Mike Stuart had built a Heisler loco with special side cylinder valve gear, which became obvious when the boiler was removed. It was built in his usual livery of silver and red.

Anthony Caldwell had made up a dockside crane from the Centennial Crane set and this crane is quite well designed and works very well; lots of stringing required in this model. He had also built the small excavator from one of the Multi-model sets which uses the cable pulls introduced with that set as a new Meccano part.

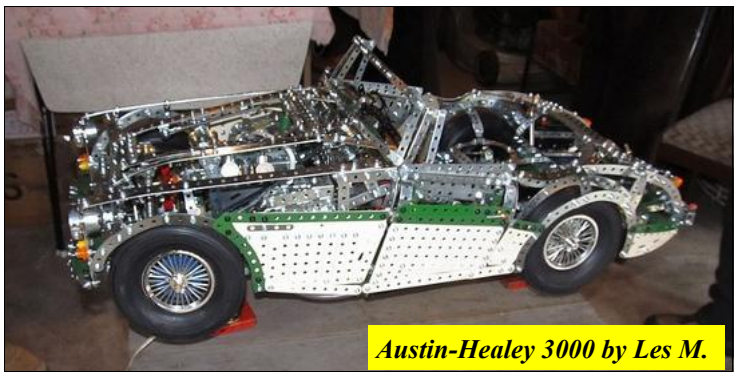
Richard Sealey had brought along some Bayko still in original spare parts boxes.

Others to attend were :
Neil Carey, Peter Hancock, John Denton, Basil Pinhey, Graeme Wrightson, Geoff Clark with his range of gears **and George Ovenden.**

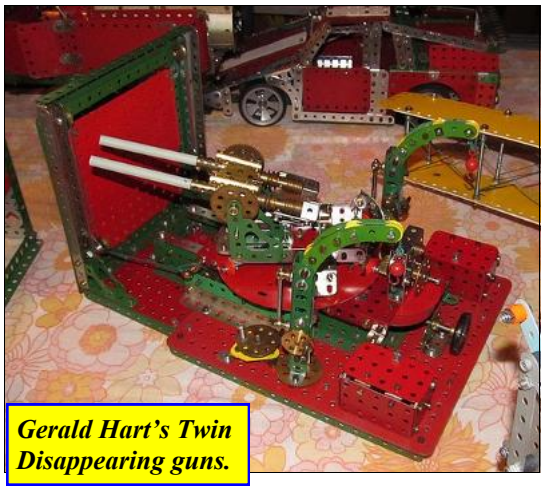
There was a discussion led By Peter Hancock about various club matters and then we were summoned to afternoon tea by the ringing of the train bell that Neil had fixed up downstairs (purely for his own benefit, of course).



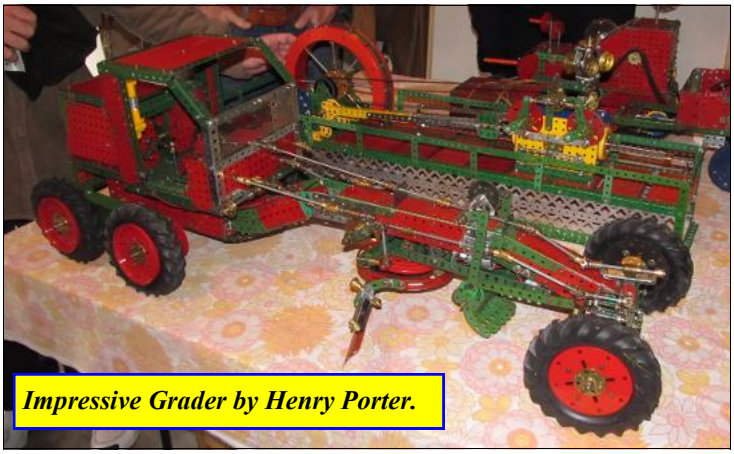
David Wall's clockwork bulldozer.



Austin-Healey 3000 by Les M.

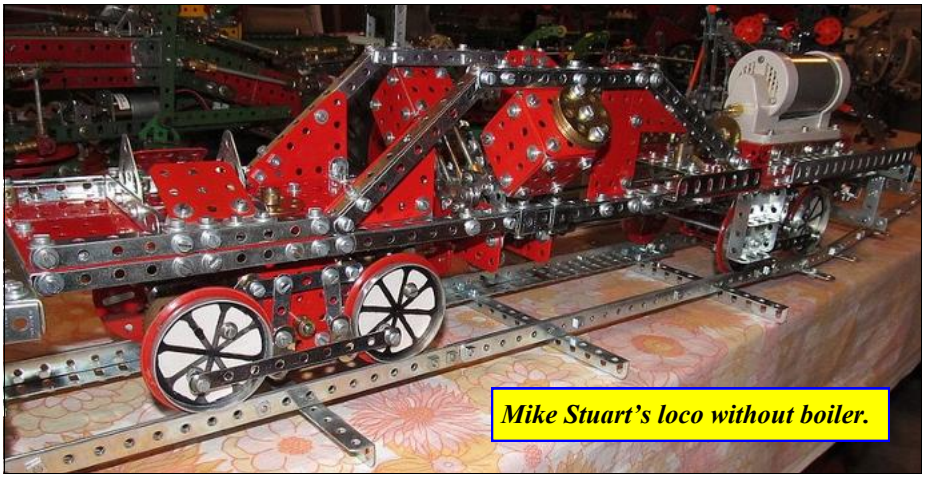


Gerald Hart's Twin Disappearing guns.



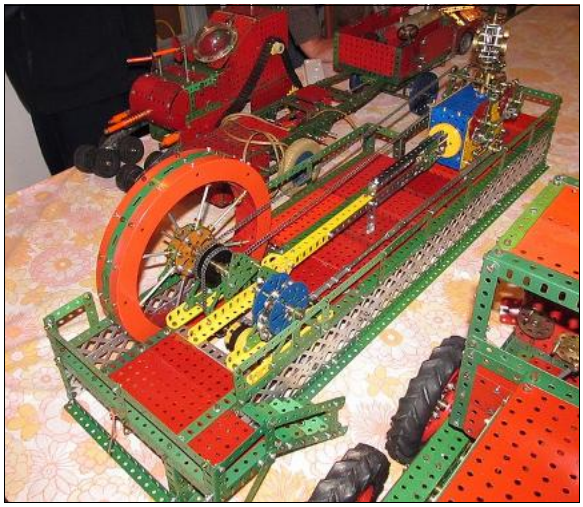
Impressive Grader by Henry Porter.

Gary's Higgin's Märklin set.

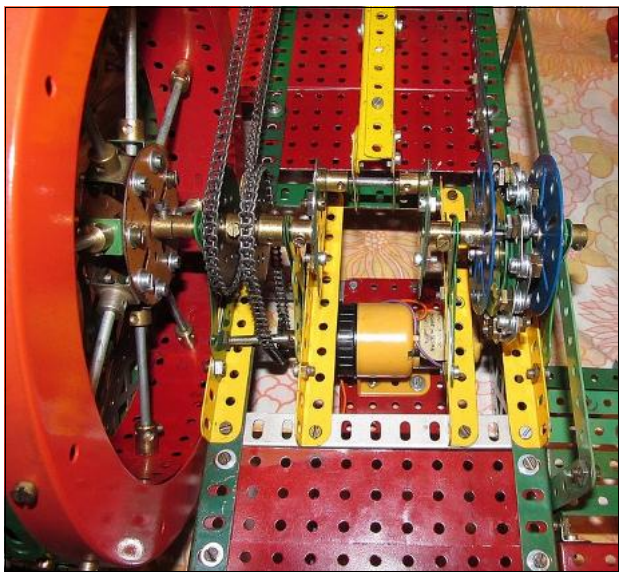


Mike Stuart's loco without boiler.

Anthony Caldwell's models.



Gerald Hart's Corliss horizontal steam engine.



The New Evolution Models

Part 1: Tow Truck (Model No. 7200)

by Les Megget

I purchased this new model from Amazon France in mid-August after Amazon-UK refused to post it to me in NZ. It cost nearly $120 landed and arrived a week after ordering it.

The colourful box has the usual tear tab along the back and on opening reveals about 6 plastic bags full of assorted parts (460+ the box says), both plastic and metal. The box could be about half the size and all the bits would easily fit in it! The A4 sized book of instructions runs to 52 pages and has excellent coloured diagrams with few words but some of black parts were hard to distinguish when printed in black. I had trouble with the small and larger plastic spacers, they both look very similar in the instructions and I had to swap them around after using the wrong sized ones in a couple of instances.

The orange painted model goes together well with no obvious errors in the instructions. Comments made during construction were:

1. The triangular doors are fixed by Narrow 3-hole Strips to Narrow 8-hole Strips (holes at $^1/_4$" centres which form the back side members of the cab (the B-pillars I guess). However the bolt has to pass the edge of the L-shaped Narrow piece which forms the rear bottom corner of the cab. Thus the bolt attempts to lie not horizontally and doesn't tighten up easily. I found it easier to drop the fixing bolt 1 hole ($^1/_4$") which also meant I could tighten it through the door's lower rear hole.

2. The front track of the wheels is about $^1/_2$" wider than the rear wheels, which looks peculiar when the front wheels are pointing straight ahead. One solution would be to swap the longer 115mm axles used for the towing bars for the 100mm rear axles and use an extra large Spacer on each side between the wheels and the chassis.

3. The crude steering is very course and tight. It requires only about a 20 degree turn of the steering knob, which protrudes from the front of the cab roof, for turning lock to lock. The 2" long steering arm is just too long and could be reduced by having the steering knob coming out of the bonnet top instead.

4. The petrol tanks fixed to the chassis rails behind the front wheels are difficult to rigidly fix using the small Spacers on single 38.1mm long black Pivot Bolts. I used 2 large Spacers with just one Nut inside the chassis. The chances of squashing the zinc Sleeve Pieces by over tightening isn't a problem

5. The mechanism to raise the tow bars uses a plastic Worm meshing with a new part, the Crank with a gear moulded into one end (P/N C888). This works quite well but the top bearing that holds the vertical driving axle is flexible (being the cab roof) and any reasonable load on the tow bars (another small model) will sink towards the ground due to distortion of the roof.

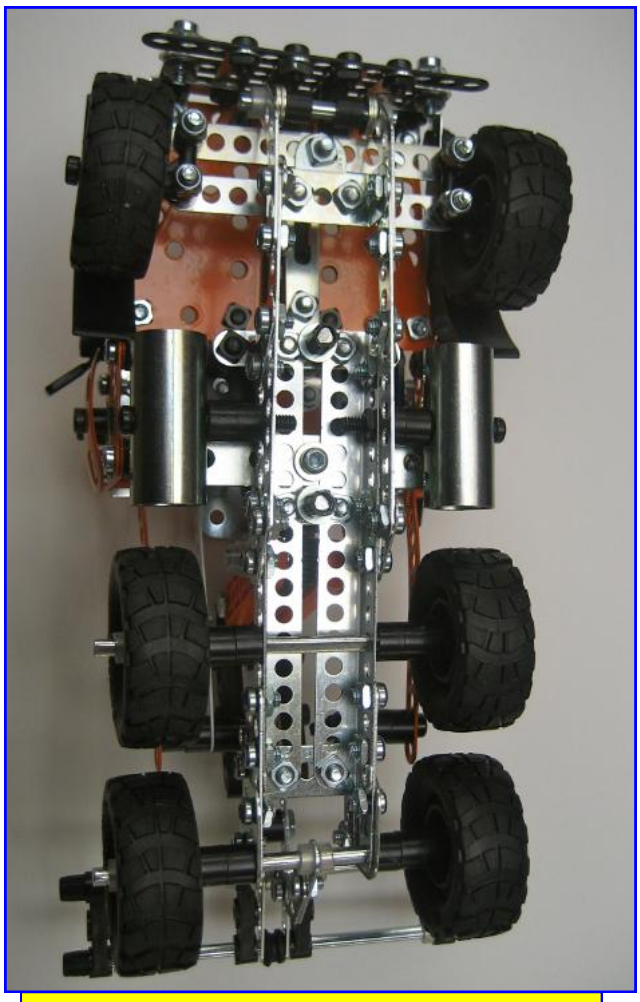
The use of $^1/_4$" spaced holes on this model is hardly necessary, normal Narrow Strips and new Narrow Obtuse Corner Brackets and Corner Brackets (with $^1/_2$" spaced holes) would have sufficed. The new narrow parts certainly will be useful in other models but the orange paint job is new and won't match anything else! The chassis uses new $4^1/_2$" Narrow Girders (17 holes) which are wider than the narrow girders made by *Ashok*. These allow nuts and bolts to be fitted in opposing holes, an almost impossible task in the *Ashok* versions. One case where the $^1/_4$" spacing was used was in the chassis rails, so that the forward rear axle could be positioned closer to the rear axle by $^1/_4$".

This model includes a few long Black Bolts and black Nuts, neither of which I have seen before.

I thought this model had good play value for the 9+ year old child it is recommended for but it isn't cheap for an un-motorised model.

Bolt can't be fitted correctly due to the edge distance of lapped Narrow Strip with holes at 1/4" centres.

Completed model.



Truck from below showing excessive front wheel track compared with rear wheels, built as per instructions.

Tow supports in lowest position, lowered by knob at rear of driver's cab.

Why not join the ISM?

by Bob Prescott (ISM 565)

The International Society of Meccanomen has, as its title indicates, members from around the world – some thirty countries in all. The organisation's mission is "to encourage links in the Meccano world across international boundaries", a mission I am sure we all share.

The annual subscription at the present time is £26 and this is what you get:

The magazine "The International Mecanoman" (the I.M.) airmailed to you three times a year. This is an excellent 32 colour page magazine with lots of pictures. It includes articles about meccanomen, club exhibitions and models from all over the world as well as a 3 or 4 page "model building technology" section which will help both experienced and inexperienced members.

The ISM Yearbook which has the Society's Constitution, ISM awards, and contacts' information. There is a detailed list of all members and clubs, guilds and societies throughout the world as well as suppliers of Meccano sets and parts.

There is also an ISM badge available at a small cost.

The ISM has a website www.internationalmeccanomen.org.uk with lots of Meccano and Society information including how you can join and pay with your credit card.

Don't worry if you are not on line, I can provide a membership application and my details are inside the front cover of the NZFMM magazine. Feel free to contact me if you want any further information.

So take action NOW and join the ISM for the 2014 year.

The New Evolution Models
Part 2: Truck-Crane Model 8200

by Les Megget

This set reportedly has 680+ parts, most of which are either yellow or black. The yellow is the same as used in the Tintin float plane but darker than the French yellow which has been around for maybe 20 years now. The box is larger than that used for the tow truck model but again there is plenty of empty space in the box. There is actually one brass piece in this set, a short Threaded Coupling, along with 35 new Narrow Strips and Corner Brackets with holes at 1/4" centres.

1. Again I found it difficult to distinguish the black parts in the manual. You need a magnifier to see the subtle differences between some parts in the instructions. It would be better if the black parts were printed in a grey colour with a black outline perhaps.
2. There were problems with the bolt heads not being able to pass the edge of lapped Narrow Strips with 1/4" hole spacings which tended to take the paint off the edge of the end with the strip and the bolt not seating correctly.
3. One bolt on the cab side is incorrectly positioned in the instructions but is correct on the front of the box image.
4. The driver's seat is impossible to fit correctly because of the 2-hole bracket fixing the fake steering wheel. Either force is required to straighten the bracket a bit or you need to fix the seat down 1/2", which then restricts the steering lock.
5. The yellow paint on the normal 1/2" wide Strips and the 3 by 3 hole Plates was peeling badly from the edges before I even got them out of their plastic bags. Poor steel preparation seems to be the problem, as there were rust stains under the peeled paint. On a couple of strips the paint was very lumpy as though it was not adhering to the steel. Meccano France need to improve their quality control I'd say.
6. The 6 plastic wheel rims needed reaming out with a small round file so that the rims could run freely on their Long Pivot Pin axles. The problem is too thick a zinc coating on the pins.

This model is quite innovative with its plastic pseudo-hydraulic luffing cylinder driven by a new Plastic Bevel gear and the 4 stabilizers incorporating the crank with a moulded gear on one end, which work very well. I thought the cylinder might have had a coarser thread on it (hidden inside a sealed unit) but I doubt it as it takes a lot of turns of the little turning knob to luff the telescoping boom. The same goes for the telescoping boom mechanism which uses a normal Threaded Rod running in the Threaded Coupling.

This model looks very attractive and does remind me of many small mobile hydraulic cranes. I had earlier purchased the equivalent small *Lego* model truck-crane, thinking that both models were the same scale. However as you can see the Lego model is considerably smaller but they do look very similar. Who copied whom? Surprising the Lego model cost almost as much as the Meccano set and it weighs about a tenth of the Meccano crane. So value for money; Meccano wins here.

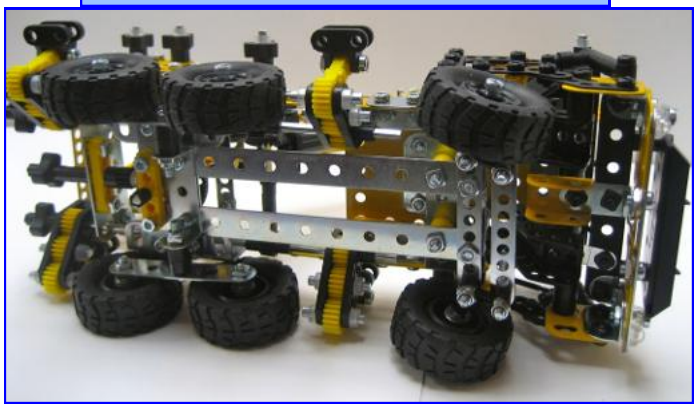
The steering is much more successful on this model and is controlled by a knob protruding from the cab roof. The crane's "roller bearing" is just a tri-axle bearing in plastic 3-hole pieces across the chassis and slewed by another knob protruding from the back of the truck driving a large plastic Contrate on the slewing axle. It's a bit flimsy so you probably can't lift much more than a small Lego model, which is more than the Lego crane however. That crane will lift a couple of Lego strips at best!

The crane hoist relies on the friction of those small clear plastic Collars to brake the winch shaft to stop the crane dropping its load as soon as you take your fingers off the winding knob. There is lots of play value with this crane-truck but I'm sure dad will have to help his son/daughter construct this model. I had to resort to using a tack hammer a couple of times to drive the over-zinced axles through the plastic strips. The new clear plastic headlight pieces and the exterior cab mirrors certainly add an air of reality to the model. I haven't stuck the stickers on my model (warning strips, number plates, etc) as I want to use the parts in other models.

The instructions for the other model shown at the back of the instructions (a car recovery truck) can be downloaded from the Meccano website.

While I was waiting for this new set to arrive I built the model using "conventional" Meccano using the downloaded instructions. As you can see the $^{1}/_{2}$" wide Strips and Corner Brackets makes the cab look a lot heavier but it does everything the new model does. The wheel rims, tyres and seats came from the Excavator set of about 5 years ago.

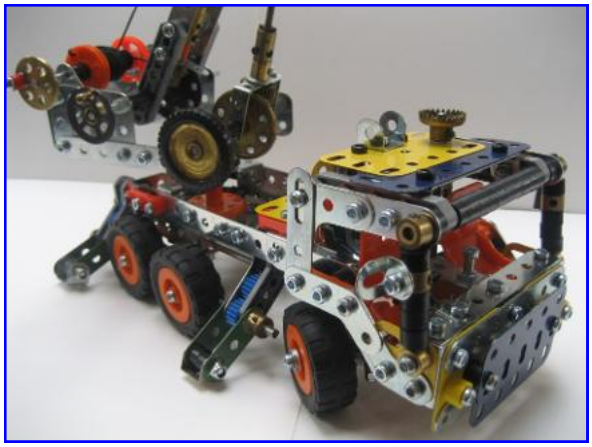
New plastic luffing cylinder and Bevel Gear.



View from below shows new gear-cranks in stabilizers.

Mistake in instructions shows steering shaft passing through $^{1}/_{2}$" wide chassis strip.

Comparing Lego's smaller crane-truck (front). Both booms at max luff. Meccano's is not great.



The Editor's attempt at making the new crane-truck using conventional $^{1}/_{2}$" wide pieces and Cranks for the stabilizers. Note much better luffing using a Threaded Coupling and Large Contrate driving a 25 tooth Pinion. Large fingers require larger turning knobs for crane controls!

French Knitting – a Multiple Meccano Yarn!!

by Graham Jost

The development of French Knitting Machines (FKMs) following David Couch's original intermittent-motion latch-hook FKM, documented by him in CQ98, and Hugh Ramage's significant continuous-motion improvement a few months later, has been little short of astounding. Continuous-motion allows a wondrous simplification of the mechanics of the machine, an easy reduction in its size and a spectacular increase in the speed of knitting. The FKMs described below constitute the evolution of these machines along a particular path from my original one-yarn FKM: to knitting with two yarns and then with three – and all achieved well within a year!

One-yarn FKM

The development of a reliable one-yarn FKM did not occur in isolation but in close collaboration with John Stark of Nelson, NZ. This occurred during 2012, and the evolution of our FKMs was complete by the end of the year. John has since gone on to develop an FKM of significantly reduced size and capable of knitting at mind-boggling speeds. My one-yarn FKM, Fig. 1, knits at a more sedate rate, and was documented in detail in CQ100.

Figure 1

Both John's and my FKMs include cop feed, an overhead rotating Gear Ring to distribute the incoming yarn to the knitting area (the Distributor), a knitting throat, four latch hooks oscillating in turn to do the knitting and a powered pair of pinch rollers to draw off the completed knitting. Bob Thompson has kindly provided a particularly clear Virtual Mec image of my gearing and Cranks to drive the latch-hooks, which is reproduced here with his permission, Fig. 2.

Two-Yarn FKM:

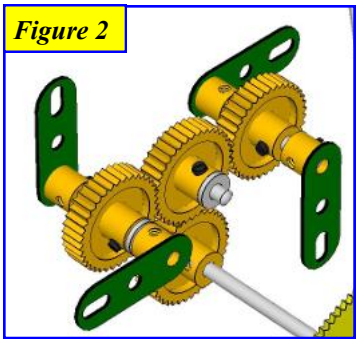


Figure 2

During the latter part of 2012, I had begun to wonder whether it might be possible to knit using two yarns – after all the feeder hole in the Distributor of my single-yarn FKM was crying out for a mate to occupy the hole opposite! Could French knitting be done using *two* yarns? Fortunately, SWMBO demonstrated in no time that it could, Fig. 3. The scene was set!

Figure 3

It was unclear in the beginning exactly how, using my one-yarn FKM as a basis, two-yarn knitting was to be achieved, but in the event there was no difficulty. Rephasing of the hook motions so that diagonal pairs of hooks were operating in sync and 180° out of phase with the other pair, and halving the speed of the Distributor, were all that were required. There remained the matter of feeding the yarns to the Distributor *without entanglement*, and this was less straightforward.

In my first attempt, two spools of yarn were mounted directly on top of the rotating Distributor, Fig. 4, feeding directly down to the hooks below as required. This worked very well and guaranteed no yarn entanglement, but had a serious drawback: the available supply of yarn was very limited. Larger replacement spools were tried, but looked just awful! I was prepared to stay with this initial arrangement, but the idea of having two larger cops in place of the original single cop to provide a much longer run still gnawed at me, and I decided to give the matter more thought.

I first tried what I considered a very elegant arrangement by feeding the two yarns through flexible plastic tubes connecting cops and Distributor: the cops were mounted on a rotating turntable on the other side of the machine. This did work quite well and did not tangle, BUT required a lot of energy to drive it – my plastic tubes were just not sufficiently pliable to allow this scheme to be practical here. They also flailed about most untidily at speed! Perhaps wisely, I never bothered to take a photo of this particular arrangement. But it did show me that, viewed from the top, Distributor and cop table had to rotate in opposite directions. I know; it should have been obvious!

Clearly, a mechanical rotating assembly on top of the FKM was required, to transfer the yarns from the cops on one side of the machine up, across the top and down to the knitting area on the other side. It would be quite free of the drag and load that the plastic tubes had added. Fig. 5 shows a close-up of the overhead transfer assembly as finally developed. It comprises a 1" Bush Wheel at each end of a single shaft, two more of the same to run in pairs of supporting ½" Pulleys and 1½" Contrate Gears in-between, one to accept the drive from below, the other to cancel out the axial thrust so generated. The two yarns enter opposite holes of the 1" Bush Wheel above the cops, pass through corresponding holes in the supporting Bush Wheels and Contrate Gears and finally exit through holes in the Bush Wheel above the Distributor where they pass through opposite holes therein to reach the knitting area below. There are some sharp changes in direction for each yarn as it proceeds from cop to knitting throat, but this does not unduly hinder its passage – even knots in the yarns pass readily through all holes. Cop table, transfer assembly and Distributor all rotate at the same speed and of course there is no entanglement of the yarns.

All other aspects of this two-yarn FKM, Fig. 6, are very much as for my single-yarn FKM. Figure 7 shows the knitting emerging at the pinch-rollers and Fig. 8 shows samples of the knitting produced by this FKM during trials using different 8-ply wools and acrylics.

Three-yarn FKM:

Having achieved success in knitting two yarns together, the question naturally arose as to whether this process could be continued – could three (or more!) yarns be knitted? The answer was a qualified "yes", and Fig. 9 shows the outcome for a three-yarn knitter. There are additional problems to be dealt with, however, as the number of yarns increases.

First it has to be recognised that as additional yarns are added, so the loading on the driving motor increases. At any one time the same number of stitches are being formed as there are yarns, and the stitches are being formed more or less simultaneously. The load increases at least linearly with each added yarn: $y = mx + C$ might represent the situation to a first approximation. So the motor that might have been satisfactory for a simpler FKM might not now be up to the task. Fortunately, John Stark very kindly came to the rescue with a powerful 24-volt quality motor, which makes short work of driving this FKM.

Secondly, two extra hooks are required, making six in all. Just as four hooks were required for two-yarn knitting, now every second hook of the six is required to move in sync, their counterparts doing likewise but 180° out of phase. Not only do the two extra hooks have to be fitted in at the knitting throat, but also the throat itself has to be modified to suit. Further, the drive to the extra hooks has to be arranged. Fortunately, this could all be arranged without difficulty.

The knitting throat was first rebuilt using two 2½" Narrow Strips bent as shown in Fig. 10 to form a square. Four hooks now slide up and down in, and are guided by, the four corners on the outsides of the throat. The two extra hooks slide up and down at the centre the flat parts of the formed throat, as shown in Fig. 10. The arrangement of the hooks is not perfect – that would have them 60° apart around a circular throat, but it seems to matter little in producing a uniform knitted output. The drive to them was at hand: it is taken from an extended existing shaft below the central drive gear, Fig. 11. It was not possible to use the idler gear shaft itself in the centre between the outer gears because additional Cranks there would foul those existing This all meant that an additional offset gear was needed to drive the whole, seen at lower right.

For the two-yarn FKM, the yarns were spaced 180° apart throughout their journey from cop to knitting area. Here, with three yarns, they need to be spaced 120° apart throughout. So first, the three cops of yarn need to fit thus on the rotating turntable. This was achieved using two sets of 3" Curved Strips, arranged and spaced apart as shown in Fig. 12 – the spaced pairs provide mounting stability for the cops. The Faceplate bases of the cops fit neatly in the outer holes of the Curved Strips without touching.

Figure 4

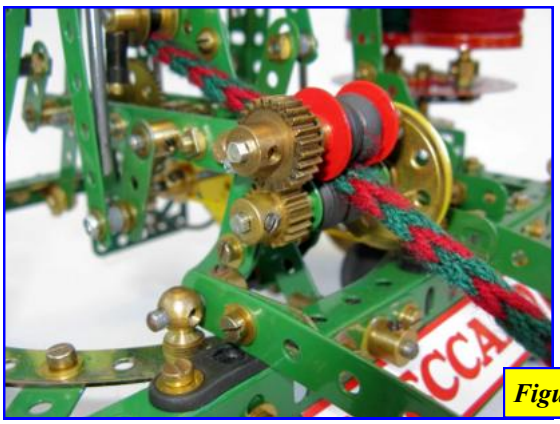


Figure 7

Figure 8

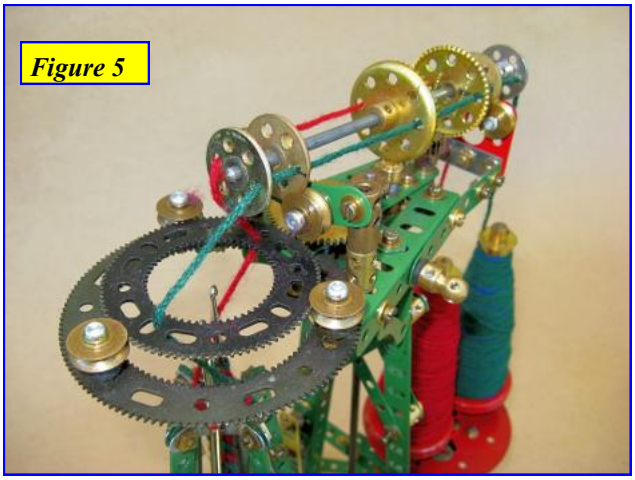


Figure 5

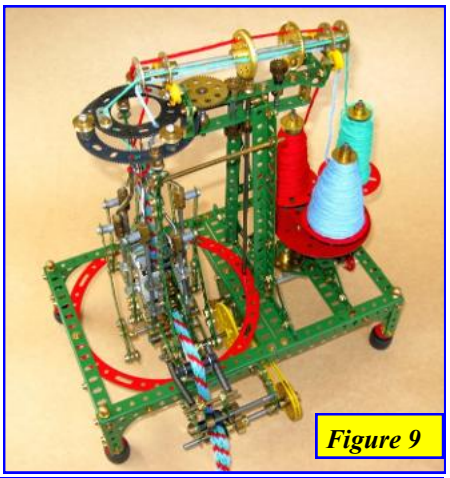


Figure 9

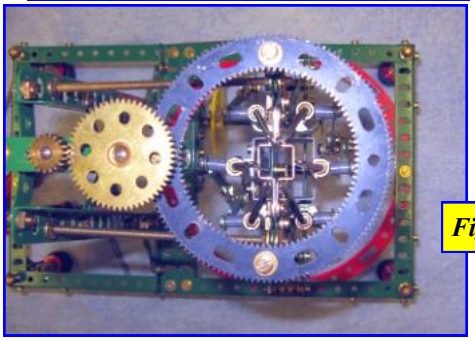


Figure 10

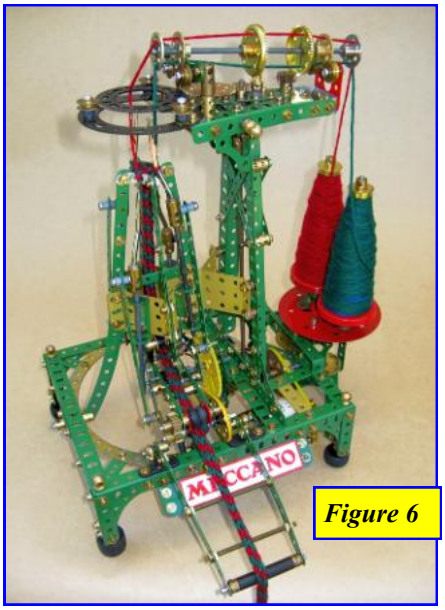


Figure 6

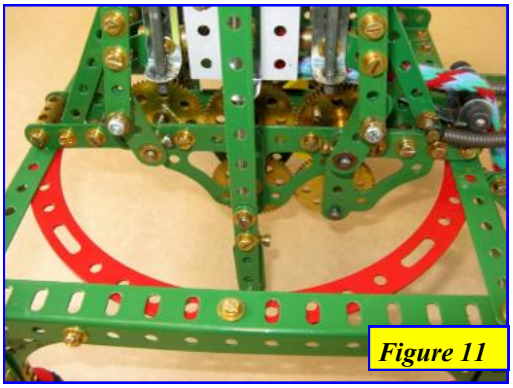


Figure 11

The yarns are then fed up to and across the top through the rotating transfer assembly and down to the latch-hooks as before. As the 1" Bush Wheels of the transfer assembly already contain six holes, the yarns are fed through every second hole thus satisfying the angular spacing requirement. The Contrates pose no problem as the yarns can readily pass through holes either two or three apart before exiting the final 1" Bush Wheels as required. None of this is crucial, but it is nice to have things as close to being right as possible, Fig. 13.

It is more important to have the yarns entering holes in the rotating Distributor as required. One yarn passes through a regular hole, and the other two pass through the open holes of 1" Narrow Strips fixed to two slotted holes such that their open holes and that opposite are as close to 120° apart as possible, Fig. 13.

Finally, a redesigned and necessarily more robust pair of geared pinch-rollers has been fitted to draw off the knitting as required. This is rather heavily spring-loaded to grip the emerging knitting but at the same time to permit the ready passage of any oversized obstacles in the knitting as before, Fig. 14.

Samples of the knitted output produced by this FKM are shown in Fig. 15 and all three FKMs are shown together in Fig. 16 (see the front cover).

In Conclusion:
Although there is no reason in principle why yet more yarns – and latch-hooks – cannot be added to produce French knitting using correspondingly greater numbers of yarns, the realities of spacial limitations in fitting the hooks around the knitting throat, driving them and arranging the cops and the feeds to them suggest that perhaps three yarns represents a practical limit. More yarns mean more raw materials too – a matter for consideration if exhibition running is proposed.

* *If all hooks are producing their stitches at exactly the same time, the load on the drive is unnecessarily high. By off-setting the angular positions of the three pairs of cranks just a few degrees away from their perfect in- or out-of-phase orientations, this instantaneous loading can be much reduced, as each stitch is being formed just a little ahead of, or behind, that of its nominal in-phase neighbour. Fig. 11 shows the Cranks not exactly in-phase nor out-of- phase with each other, just closely so!*

This article is a combined and modified version of articles published in the Newsletter of the Melbourne Meccano Club, Inc., CQ and the Sheffield Meccano Guild Journal. Additional stills and videos of my FKMs can be seen on Charles Steadman's NZ website, beginning at http://www.nzmeccano.com/image-61702.

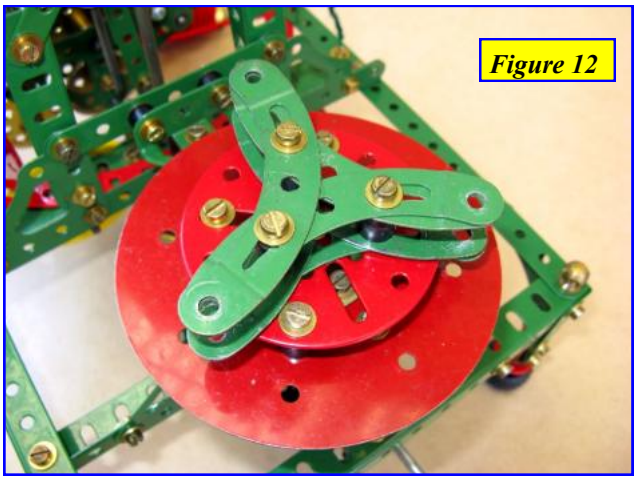


Figure 12

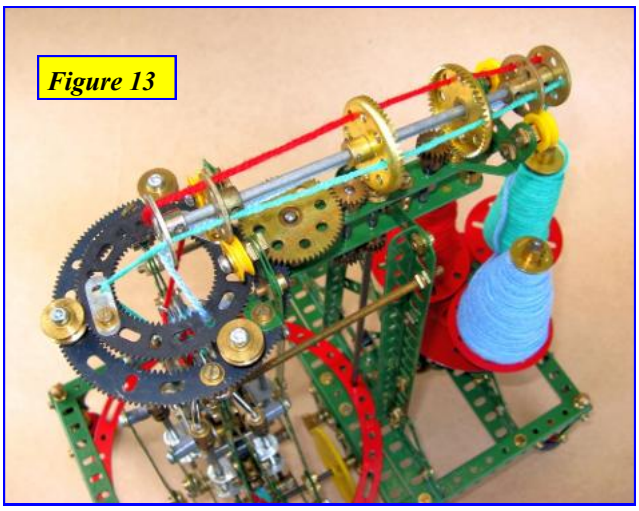


Figure 13

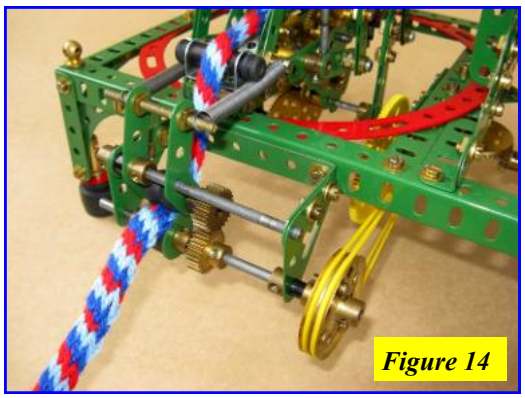


Figure 14

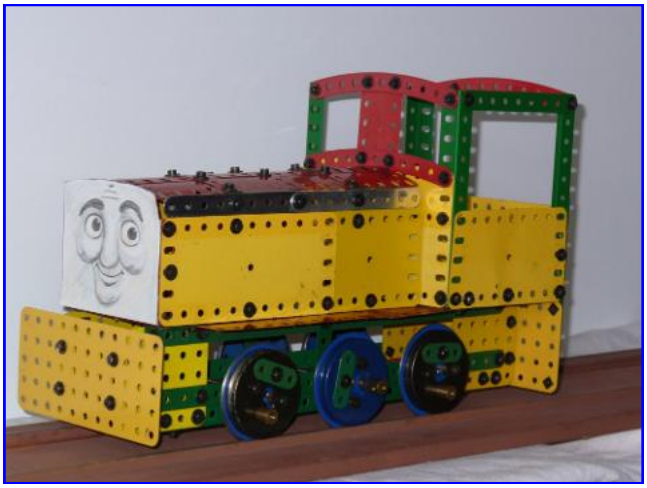
Figure 15

March 2014 Madness

Competition: Design an electric or clockwork powered locomotive

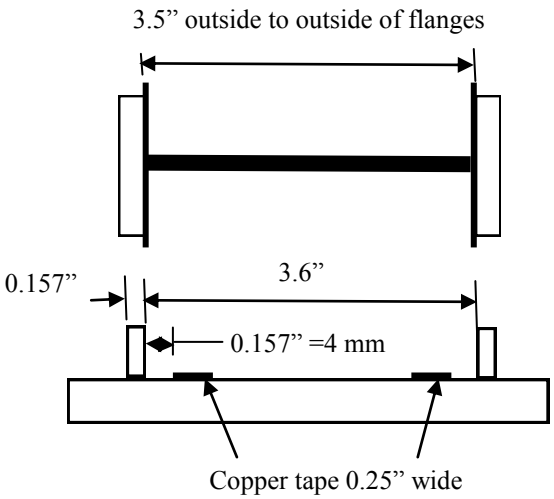
1. Meccano, replicas and compatible parts.
2. 3½" gauge (see attached sketch for cross section of track.)
3. Models (rail variety) about 5½" wide and length to suit that width.
4. Other models (Thomas's friends) to be of a size complimentary to the rail model scale.
5. Try to use the correct colours for the models.
6. Make the models work. Clockwork power is OK. If power supply to the models is via the copper tape on the track sections, make the positive pickup on the left side of the model to make it go forward. Radio or infra red control with independent power supply is OK.
7. Appropriate face on the front of the model is very desirable !!
8. Working and appearance of the model counts for all.
9. Judges decision is final.
10. 1kg of liquorice allsorts for the winner.
11. See photos of track and partly constructed model for guidance.
12. For inspiration and range of characters, search 'Engine Depot: Thomas the Tank Engine- meet all of the Engines'. OR, purchase or borrow a book portraying your favourite character or characters.

More than one model is a good thing !

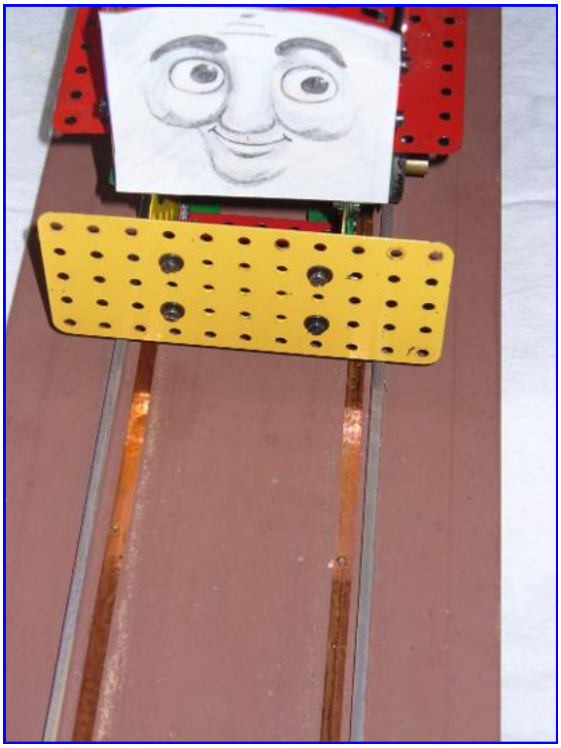


Simon's test model loco.

Saturday, March 8 2014, St Andrew's Church Hall, 91 Titiraupenga St, Taupo Town Centre, 0900hrs.



Cross-section of track. Track and rails are timber and non-conductive. NB Not to scale.



Rails showing copper tape pickup strips.

A Visit to the Henley Meccano Gathering
by William Irwin

I happened to be in London on holiday last August which coincided with the annual Henley Meccano Gathering at Henley-on-Thames on Saturday 31st August. Also Michael and Eve Adler were in London, so I arranged to meet Michael at Paddington Station on Saturday morning to catch the train to Henley at 8am. An hour later, after one change of train, we arrived at Henley in time for the start of the gathering at 9am in the local church hall.

The exhibition area extended over several rooms and passages in the church annex. Every available space was filled with marvellous Meccano models and collectibles. The usual traders were ensconced at one end of the hall with mouth watering stuff for sale. I was allocated a small space in the hall to put my laptop PC running a continuous slide show of the MOTAT differential analyser. I was right next to Andre Welti of AMS club in Switzerland who had a pristine vintage Erector set on display with a small model built from it. It was an uplifting experience to meet so many of the Meccano personalities in person with whom I had previously been in correspondence.

Some outstanding models were Nick Rodgers petrol tanker lorry, a crane with the jib built mainly of rods, a complete fishing port with ships and other shore vehicles, a lovely set 9 manual bus in pristine dark blue and yellow, and a lovely horse drawn fire engine by George Illingworth. Clive Weston and Tim Gant put on a marvellous display of every Meccano set no 6 from its inception to 1927. At 12.00 we all went in to the church itself were the ISM annual general meeting was held. It was chaired by Adrian Williams in the absence of the chairman Philip Webb who was attending his son's wedding. Overseas visitors were welcomed including Michael Adler, myself and an Australian from Sydney. Thereafter we retired for lunch, purchased from the on site kiosk, and interesting conversations in the adjacent outdoor seating area.

The highlight of the show occurred after lunch with the arrival of the full size Meccano motorcycle and sidecar. This machine had just returned from the Isle of Man where James May had driven a complete circuit of the track on it, albeit at about 10mph, accompanied of course by TV cameras. So expect to see it on your TV screens in about November. It is electrically driven by 96 small Meccano electric motors arranged in circles. These motors are good enough on the level but a booster non Meccano motor is provided for inclines. One of the two builders was present for discussion of the building process. The parts were provided by the Meccano company and the motorcycle will be returned to them.
See the photo of James May's bike at the bottom of p21.

Wind Mill
by Roman Johnston

Ross Mitchell (Oamaru) had accumulated up a fare few Sector Plates (P/N 54) and was wondering what to do with them. Ross came across with the conclusion of making a wind mill, (which has been a want to build model for a while but other models had arisen). Ross didn't want a normal build where we bolt the sector plates together by their flanges so we had to think hard about different ways we could build it. I got thinking and came up with this wee neat idea. It incorporates a Sector Plate with two Obtuse Angle Brackets being bolted to the front side on the first and fifth holes from the narrow end. From the narrow end it is bolted on the right side row of holes. At the narrow end of the Sector Plate bolt a 2" Strip that has the centre hole. At the other bracket bolt a 2 ½" Strip. At the other ends of these strips bolt another Obtuse Angle Bracket reversed to the other end. This will be bolted to the underside of the next sector part. The centre holes of the 2" and the 2 ½" Strips bolt a 7 ½" Strip. This gets bolted on to the Circular Plate in the centre. This gets repeated for another 32 times to create a circle like the first photo. We bolted a Large Axle Bush to the centre of the Circular Plate; this is because we used a Large Axle to handle the weight of the head. This was on a stand that was made from 24½" and 18½" Angle Girders with angle girders as cross members to make a rigid structure. This is a model that was very quick to construct, as it was repetitive. It only took about 8 hours to construct in all. So here is another idea for you guys to use up those floating sector plates.

Christchurch Meccano Club

(Est. 1929)

November 2013 Quarterly Report

by

Mike Howse

Over the last three months CMC members were busy preparing models for a display at The Big Little Train Show which was held at the Pioneer Stadium in October. The show is an annual event organized by a local Model Train enthusiast group.

As usual the CMC was able to provide an extensive display which was very popular with members and the visiting public.

Planning is well in hand for the CMC's Meccano Roadshow Display to be held over Easter 2014, the main hall at Cashmere High School will be the venue. Located in Cashmere, a well-known suburb in Christchurch the High School is located close to a large city mall with school grounds easily accessible from two entrances and there is excellent on-site parking.

Also being held over the same Easter weekend, just a couple of streets away from Cashmere High School at Pioneer Stadium will be the New Zealand Antique's Fair.

With strategically placed flyers, signage and posters we would hope to see some of those patrons at our event as well.

With Christmas rapidly approaching planning is again well under way for the annual CMC Christmas function which will be held at the Papanui RSA on Friday 6th December starting at 07:30pm.

Any visiting Meccano enthusiasts' to Christchurch at that time, and their families are most welcome to attend.

Train Show Hall layout.

Donald McKenzie's Traction Engine.

Donald McKenzie & Neil Pluck discuss the Starship Enterprise.

Peter Satterthwaite's steam engine.

Secretary Roland Jasper's popular Racing Car game.

The Lang family's display.

The *South Taranaki Star* community newspaper in October 2013 100 years ago column commented " E Dixon & co, the Music Home, Hawera has for sale Meccano sets from 5/6 to 8 pounds. Expensive by 1913 standards.
Thanks to **Robin Rye** for this snippet.

F1 Meccano Tomatoes
Location: Home /VEGETABLE SEED/ Tomatoes/Meccano F1
Product Information:
A new Vine ripe tomato from the same breeder as the national winning Cedrico and could prove to be every bit as good. I was really pleased with this variety in 2009 and I think it could well be the one to beat Cedrico. Produces beautifully shaped fruit with a long shelf life. For best germination, cover the seed very thinly, virtually uncovered, with some fine Vermiculite.10 seed per packet, price: £4.20.
You have got to be kidding right? It's hard enough looking for Meccano on Google without getting all the clothing range, now we have Meccano tomatoes. I suppose they are full of holes and obviously faster as they are F1's.

James May Meccano Motorcycle:

This from our own **William Irwin**
Attended the Henley Meccano gathering yesterday (and ISM AGM). A full size working Meccano motorcycle was on display. It had just returned from a full lap of the Isle of Man TT circuit driven by James May. It will be the subject of a TV programme later this year. Driven by battery power and 96 small motors.

Comments from Peter Finney on Spanner:
All the axles on the motorbike for the drive and the wheels are standard axles. The wheel hubs are made up from a cage of standard axles running in Meccano ball bearings. The only non-standard parts are the two brass spacers. There were no large axle parts used. The bearings were built up using standard Meccano parts - ball bearings using standard Meccano balls. The wheel hubs are built up using multiple Meccano (or perhaps 4mm) screwed rods. The most impressive facts about this model (IMHO) are:

1. As far as I could determine (others may be able to add to this list) the only non-Meccano parts used are:
   a. Batteries (lead acid accumulators).
   b. Electronic control unit/invertor (from electric golf buggy) and sundry switches and gauges.
   c. Auxiliary motor (3kW) - used only when going uphill!
   d. One bicycle disc brake with dual callipers (this enabled the trike to be licenced to run on IOM roads - it is not street-legal in UK). When originally built there was a disc brake on the front wheel - when applied this caused the en tire front end (forks and wheel) to collapse –what a surprise!
   e. Tyres.
   f. Final drive sprockets.
   g. 4mm SS rod used instead of standard Meccano axle rods.

2. *It has completed a full lap of the IOM TT circuit under its own power with human cargo*.

3. The primary drive is from 96 (yes ninety-six!) standard Meccano MO motors! These are grouped into sub-units - each with 6 motors - each motor has a part No. 26 19 tooth pinion, and the six pinions in each group then mesh with a single part No. 27b 133 tooth gear wheel. The drive from the six groups is then combined onto a layshaft using standard Meccano chain and sprockets. The final drive uses a 1/2" pitch roller chain built up from Meccano bolts, collars and 1/2" narrow strips. This arrangement can propel the vehicle at 10mph on the flat!

At list prices there are about*£5,000 worth of Meccano parts* - supplied by Meccano free of charge. However - I was told that Meccano want it back to go into their Museum (negotiations continuing I believe).

IMHO this a fantastic example of what you can do with Meccano - given the parts; as has already been said - there must be several groups of Meccano engineers who could have done it - but all credit to the two guys who actually pulled it off (I don't suppose Mr May had much to do with it!)


James May's motorcycle.

Wellington Meccano Club

Meeting Report

Date: 9th September 2013

Reporter: Max George

The September meeting was held on the 9th September 2013 at the Summerset Village, Paraparaumu hosted by **Lou Nichols.**

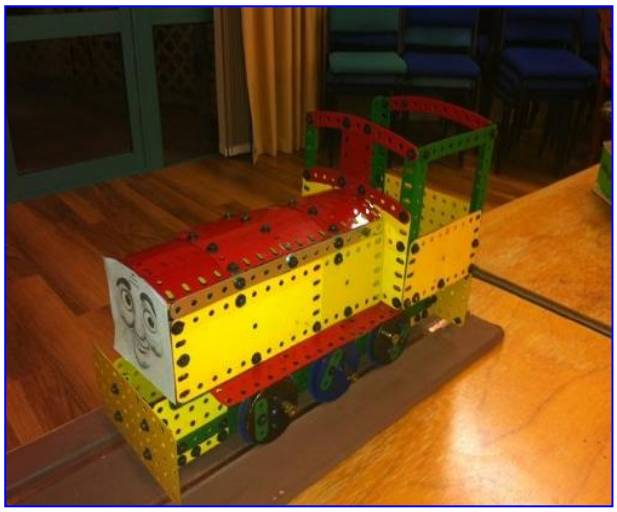
Models:
Brian Peterson brought along his 1.30m high model of the Auckland Sky Tower. He built it from a brochure about the Auckland Sky Tower and had as a comparison a very small 130 mm high souvenir tower. Brian has been asked to build a much taller tower for the 2015 Convention.

1.30m high model of the Auckland Sky Tower Sky Tower and much smaller Souvenir Tower.

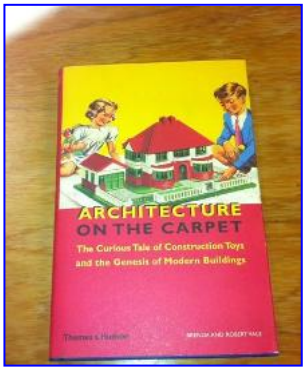
Stan Baker explaining to others how his Orrery works.

Members discussed Stan's model Orrery of the 7 moons of Jupiter. This is run by a small motor in the top with the batteries in the base of the model. This was a model Stan built for the film that included Meccano in it.

Simon Moody brought along his engine that he has built for the March Madness next year.



Robert Vale has published a book on "Architecture on the Carpet". The theme of the book is the effects of children's building toys on 20th century architecture which include both *Bayco* and *Meccano.*



Easter 2015 Convention:
Following the discussion that Stan & Reg had with Te Papa, the club unanimously endorsed the proposal to co-host the 2015 Convention with Te Papa, New Zealand's National Museum. Te Papa intends having a *Life & times of Frank Hornby* theme for the Easter weekend and expect up to 30,000 visitors. Stan Baker will give more details in the February 2014 issue.

A general discussion about the Convention and models over supper.

****

Book Review:

Architecture on the Carpet

by Brenda & Robert Vale

I ordered this book on the internet immediately I read about its existence on *Spanner*. Both authors are Professorial Research Fellows at the Victoria University of Wellington's School of Architecture, where I too taught in the late 1970s to the mid 80s. So this book interested me not only as it is about construction toys but architecture and maybe a bit about structural design.

As mentioned in the WMC report Robert is a member of Club and has a deep interest in Meccano and obviously many other construction toys.

The book is in 15 chapters and has chapters on the following construction toys: *Richter's Blocks, Meccano, Lott's Bricks, Wenebrik, Lincoln Logs, Mobaco, Bayko, Minibrix, Juneero, Castos, Bilt-E-Z, Girder & Panel, Tri-ang's Arkitex, Playpax* and of course *Lego.*

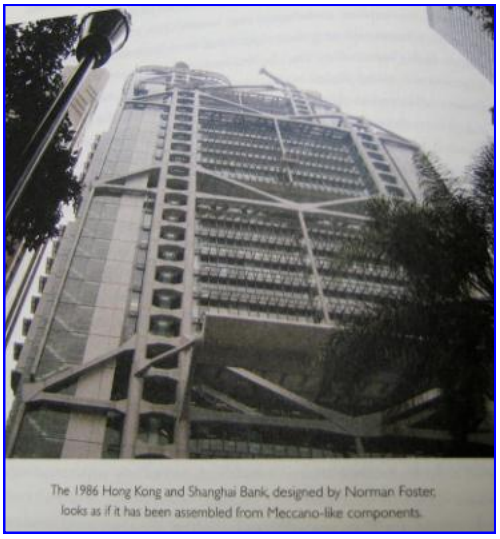
Basically each chapter describes briefly the history of the particular toy and gives examples of structures in the respective instruction manual and compares them with prototype buildings of the period. I kept asking myself which came first the models or the real life building? In some cases I think the models did come first, certainly in the case of Meccano the models did come first when considering buildings.

Quoting from the Meccano chapter "The beauty of Meccano is that it allows the construction of working machines, from motorcars to dockyard cranes, from transporter bridges to lathes and drill presses…. One of Meccano's other satisfying features, apart from the all-metal solidity of the finished models is that the things you can make from it are almost always a lot bigger than the box it comes in". Yes, true of the pre-1960s sets but not today!

The book has plenty of figures, mainly in colour, of models from the instruction manuals and the real-life buildings as well. The writing style is excellent with the authors' keen sense of humour coming through regularly. They aren't afraid to throw of at architects either, which as a structural engineer I most enjoyed.

This 208 page, hard bound, book is printed on low quality cream coloured paper, presumably to keep the cost down. The bibliography ("Notes") is extensive and runs to 13 pages using a small (6?) font.

My copy cost just over $30 through the *Book Depository,* who charge nothing for postage. It is a



Taken from the Meccano chapter.

MWT MODEL TOUR 10th AUGUST 2013

Article by Robin Rye, Images Bruce Geange

MWT Club, The member of the Year Trophy was on display, a simple Meccano Windmill model about a metre high. This year the winner was **Daryl Anderson.** The club competition this month was a four part model.

Bob Prescott rebuilt the Cable Command 6515 Excavator with Bowden cable control. He showed a book he found in a shop that day about the G W Railway showing some of what the engineer Brunel did. No Mig welder in those days.

John Freer presented two made up imitation hydraulic rams for his upcoming grader model. A unique way held the motors in place.... Spring Clips arranged in a circle. $80 on *Trade Me* purchased a Korean made Meccano rip off. Although not threaded $^{5}/_{32}$" WW, the bulk of the parts are direct copies. John's four part model challenge consisted of a pacer or trotter horse, sulky and driver. Delightful Lady he called his model. A discussion ensured on the leg action difference between trotters and pacers. Apparently giraffes are the only large animal to walk as a pacer moves.

John Ince had two Meccano sets for sale. A set 3 of 1926 vintage for $240.00 and a French MR set consisting of an electric motor and switch with battery holders. Offers on that.

Bruce Geange in the traditional way showed his latest tractor with several moving features, a David Brown Cropmaster modelled in the traditional small scale Bruce way. His four part challenge model was a saucepan and also showed a Meccano like set called Best Mini..

Hugh Ramage entertained us with an 'Executive Toy' made of Meccano. It was a small revolving device of sequential motion. This word meister likened the motion to what must be under those 'Bucking Bronco' sideshow games. His other contribution to the day was his version of Michael Adler's New Anfield Clock. Hugh explained some of the features of the mechanism and of the problems in making it.

Richard Feltham had his four part model of a coin sorting machine. Various sized were sent down the chute to drop into trays sorted. Worked very well. He invited people to trial their own coins!

Paulette Morton used a later version of Plastic Junior Meccano for her four part challenge model of a picture frame.

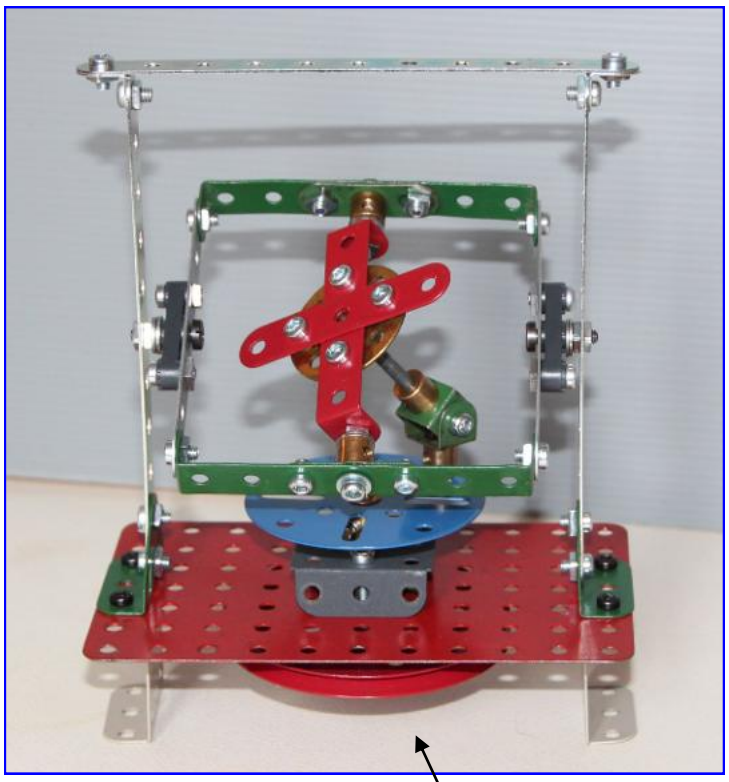
Tom Pittams changed the four parts challenge to a four odd parts challenge. He showed an early version of a Magic Motor, Loaded Sack, Crane Grab and a mystery part that turned out to be a Hornby O gauge Railway Track Rod Holder.

Daryl Anderson showed a mint Stokys set 4 of 1970.

Paul Vodanovich had refurbished old rusty mangled parts and polished them and made an Eiffel Tower model of the 'Nickel Period'. He used his self made Corner Gusset pieces with a round hole as on page 71 of the orange "The Meccano System" book. A discussion continued on part refurbishment. His four part challenge model was the horse and rider noted in "Dick's Adventures in Meccano Land". He called his horse Phar Lap. A Wanganui Property Guide publication has featured MWT member the late Don Wilson and wife Heather's house for sale.

Daryl's Stokys set.

Refurbished Eiffel Tower by Paul Vodanovich.



Hugh's Executive Toy.

Bob Prescott's digger.

New Owners of Meccano

Borrowed from The Meccano Club of South Africa Magazine, Issue 5, 2nd Quarter 2013.
By Anthony Els

Spin Master Ltd based in Canada is a toy manufacturer and distributor that has acquired Meccano, expanding its global portfolio. But who are Spin Master Ltd. and what does that mean for Meccano?

The multiple category toy company has three well-matched founders, all now in their early 40s. Ronnen Harary (Chairman and CEO) was born in South Africa, but the family moved to Toronto when he was six. In 1994 in their 20s, he teamed up with Anton Rabie (Chairman and CEO—also a South African immigrant) and Ben Varadi (Executive Vice President) to launch an off-the-wall product called Earth Buddy. This was saw-dust and grass seed stuffed into a nylon stocking, shaped to resemble a human head and assembled in a garage in Toronto. When watered, it grew grass hair. With their business know-how, they had $1.5 million in sales in about 6 months. The Spin Master company name comes from their second product—Devil Sticks, which were a twirling three piece baton set.

Spin Master now employs 900 people globally and has offices in Toronto, Los Angeles, London, Paris, central Europe, Hong Kong, Mexico and Munich, distributing to 50 countries globally. Spin Master has won Deloitte's Top 50 Best Managed Companies a total of nine times and ranks in the top 3 toy manufacturers in North America, as well as being the fastest growing company.

Continued over the page.

New owners of Meccano continued:
The good news is that Spin Master are not just a conglomerate that buys up brands and companies left right and centre. They really seem to know their stuff. They built their toy business from the ground up and have been involved with developing toys from every angle. They've dealt with inventor partnerships, business models, development, funding, packaging, distribution, resulting in several successes.

In 1998 they launched the popular air-powered Air Hogs toys (www.airhogs.com). This admittedly had shaky beginnings and required urgent running changes, but the line was ultimately quite successful.

In 2007 Spin Master began taking out toy licenses for TV brand shows (Storm Hawks and Yo Gobba Gobba) and continued to grow into the big leagues, with partners like Chorion, Dreamworks, Marvel, Disney, Nickelodeon, Hit Entertainment, Boeing, Tony Hawk, Nelvana, Sega Toys, Sesame Workshop, Warner Bros., 20th Century Fox, 4Kids and others. Their well-built website describes them as "willing to take risks, an ability to blend in-house creativity with innovative partnerships, and above all, a track record of marketing great, fun and high quality products" They continually adapt to changing times. Down the product road Spin Master have launched Air Hogs, Tech Deck, Aquadoodle, Moon Sand, Mighty Beanz, Liv Dolls, Bukugan Brawlers, Redakai, Wiggles Guitar and numerous others. A number of products have been brought to market with inventor collaborations. Several others are acquisitions or other partnerships.

So it is pretty clear: Spin Master is not a small toy enterprise by any means. They view themselves as an expanding children's entertainment company and want to attract younger kids to Meccano. Their business vision is to innovate, create and entertain, with a mission of pushing the boundaries of innovation, creativity and fun. They also have set their minds on becoming one of the most successful toy companies in the world.

All this could potentially be a problem for the established adult Meccano hobby who have a nostalgia bent. Meccano have in the last two decades wound down parts supply to small-size parts suppliers, concentrating on the mass market of selling sets to kids and ignoring adult enthusiasts to a large degree. Lets face it: the adult hobby is naggy and expensive to service. But there are definitely unexplored possibilities. There is a preexisting world-wide force of experienced, Meccano builders willing to promote the product.

Spin Master thankfully values long-haul business relationships, ideas and integrity. So it would be up to them to take advantage of the opportunities. I ask at this point: have the Society of International Meccanomen directly approached Spin Master with informal discussions on some/any possible future collaboration, or at the very least informed them of the vibrant global adult presence for the brand that would benefit from collaborating? Not many products out there have the strange loyal following that Meccano does.

It seems that the Calais manufacturing base will service the European market. Press releases suggest that Spin Masters will be actively focusing on the American market, viewing this generation as untapped. But what will that mean in terms of new production bases? More innovative, cutting-edge products? More plastic? Modernizing with e-technology, expandability? Realistically taking on Lego? Perhaps a revived Meccano Magazine? We'll really have to wait and see if it is the same-old, same-old, or something new that pleases all.

WHAT IS HAPPENING TO MECCANO?

From Dave Thom

One of the latest models No. 6450 'Gears of War', a Centaur tank; is all plastic, the only metal being the bolts, using $^{5}/_{32}$" Whitworth socket head bolts with quick start ¼" square nuts, in only longer lengths to suit the plastic they join.

There are no $^{15}/_{64}$" long bolts. What has happened to the angle girders, perforated strips, flat plates and brass gears?

I consider Frank Hornby a clever marketer of Meccano with his add-on sets and Meccano Magazines.

The kits of the old Meccano prepared for Juniors and so successful at the Powerhouse, Sydney Exhibition and Toy & Craft Show, will be a waste of time if the older parts are not available to purchase.

New Zealand Club Diary 2013

Auckland Meccano Guild:

President: David Wall, Tel. (09) 426 1965

Secretary: Peter Hancock, Tel. (09) 535 5355

Meetings at 2pm on second Saturday every third month. The next meeting will be held on **Saturday 8th February 2014** at Peter and Jan Hancock's 1 Orangewood Drive, Howick starting at 2pm.

MWT Meccano Club:

Chairman: Chris Morton 06 323 8001

Secretary: Robin Rye (06) 764 8670

Next meeting: **Saturday 7th December** at the Fordell Hotel, south of Wanganui, meeting for lunch. Visitors attending please telephone for details.

Wellington Meccano Club:

President: Stan Baker, Tel. (04) 566 7150

Secretary: Max George, Tel. (04) 232 4200

Contact: Lou Nichols, tel. (04) 297 1515

Meeting at 7:30pm usually on first Friday every second month.
Next meeting: **Friday 31st January 2014** at Stan Baker's 7 Oceanview Tce., Tirohanga, Lower Hutt.

Christchurch Meccano Club:

President: Neil Pluck, Tel. (03) 389 8134

Secretary: Roland Jaspers, Tel. (03) 358 1357

Meetings at 7:30pm on first Friday every month (except January) at Papanui RSA Club, 55 Bellvue Ave or No. 1 Harewood Road, Christchurch.

Additional Meccano Contacts

Hamilton: Don McClelland, Tel. (07) 843 4198
Hawera: Daryl Anderson, Tel. (06) 278 7666
Kapiti Coast: Bob Prescott, Tel. (04) 905 2963
Napier: Trevor Adam, Tel. (06) 843 4837
Palmerston North: Bruce Geange, Tel. (06) 357 0566
Nelson: John Stark, Tel. (03) 545 1025

Articles, etc. for the February 2014 issue of NZFMM Magazine should be sent to Les Megget **before the 1st February 2014.**

Back Numbers: NZFMM Magazines from April 2001 are available. Please contact Bruce Geange.

Buy, Sell, Auction & Exchange

Advertisements in this section are free.
First insertion will be printed in full.
Subsequent identical insertions (max. 1) may be abbreviated to fit space available.

Replica Meccano and Compatible Parts

- Fast Delivery – By far the most extensive range of new parts in the region . Over 4000 different parts ex stock.
- NZ & Australia Distributor for **Ashok Banerjee** Parts
- Very competitive prices and no minimum purchases.
- Payment to Australia or NZ bank account in or via PayPal.
- Will dispatch by courier or mail to anywhere in the world.
- Increasingly diversifying into Meccano associated items including:-
- Range or powerful small super efficient motors.
- Digital tachometers.
- 6 channel radio control systems with servos and speed controllers to suit the motor range.
- Parts fitted with miniature roller bearings.
- Bowden Cables. Ashtray tyres.
- Variable Power supplies.
- Wireless remote switches (on off and forward reverse).
- Rechargeable Batteries and holders for 5x AA batteries (6 volt).

If you need a new Meccano related item, chances are that others will too, so ask.

Money back guarantee if not satisfied.

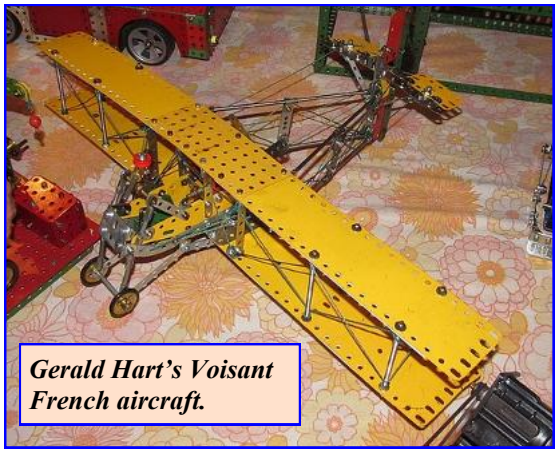
Price list in PDF, Excel or by printed copy (30 pages) .

Contact Stan Baker nzmeccanoman@gmail.com
Phone +64 4 566 7150 Evenings or +64 21 421 750 mobile

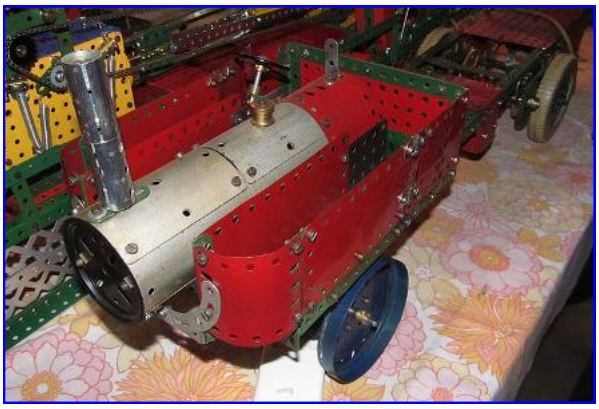
****

Recent interesting models seen at the August AMG meeting.

Mike Stuart's loco, this time with boiler fitted.

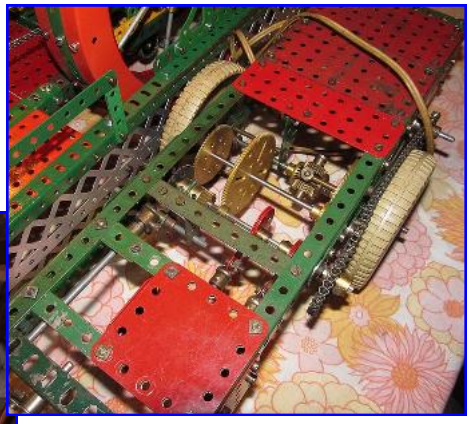


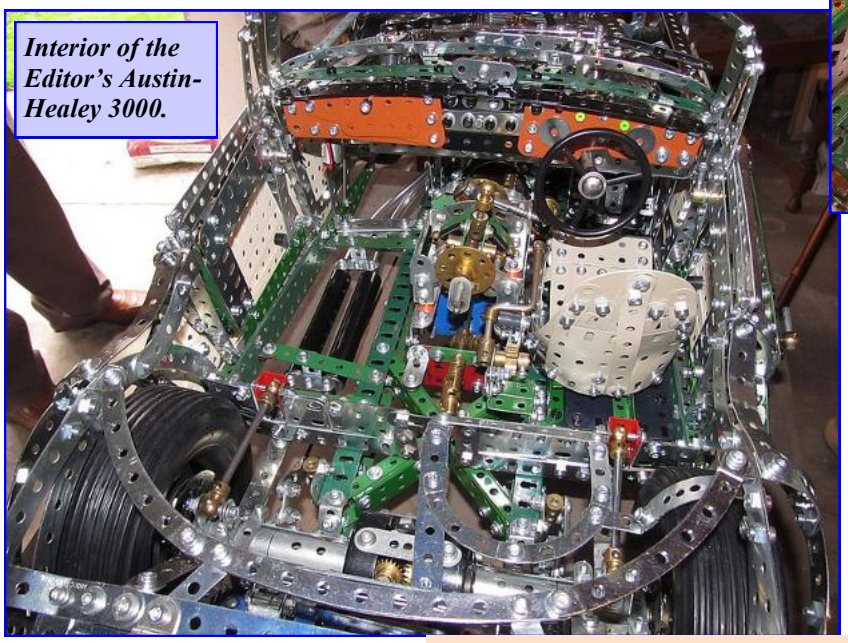
Gerald Hart's Voisant French aircraft.



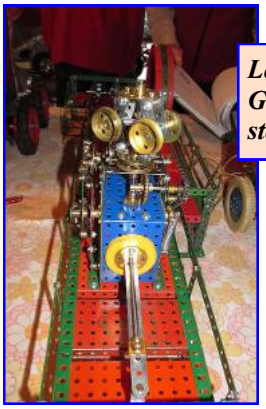
Steam Car by Henry Porter, driving details below.

AMG members and table full of models. L to R: Gerald, Mike, Neil & grand-son, George, Basil, Peter & Graeme.





Interior of the Editor's Austin-Healey 3000.



Long view of Gerald's steam engine

PRINTED BY KIWI PRINT, Papakura , Auckland.