



BOOK OF MODELS  
VORLESUNGSMODELLE  
LIVRE DES MODELS  
LIBRO DE MODELLI  
MODELLBÜCHER  
LIBRO DE MODELOS  
LIBRO DE MODELOS  
LIBRO DE MODELOS

9

April 2021

Free!

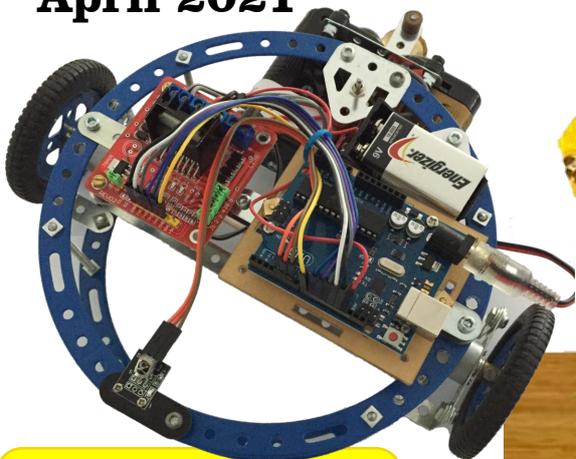
But if you want you can buy me a coffee.



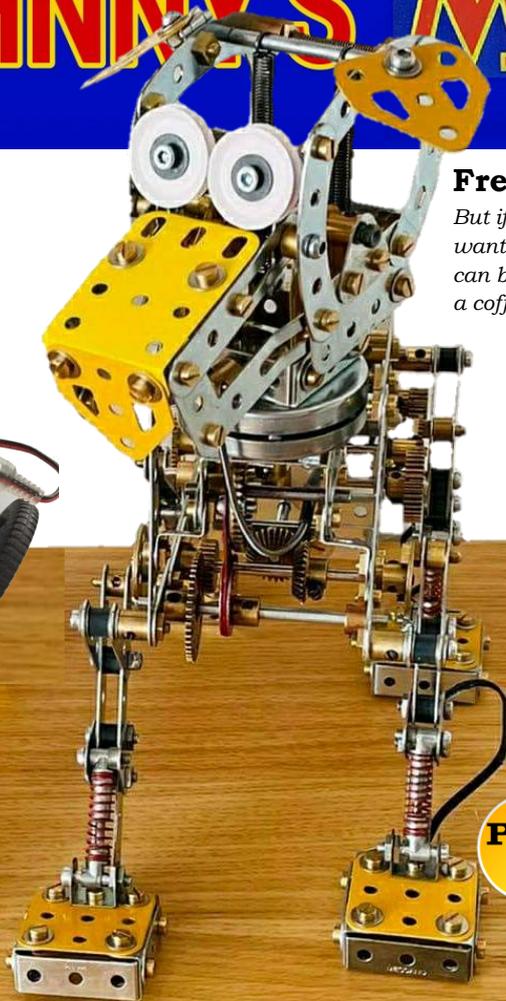
Buy me a coffee

What's Buy Me A Coffee?

Well this magazine is free, and it always will be, but I'm often asked if there's a way to contribute. Well here it is! Click on the "Buy Me a Coffee" box above and you will be taken to the website that allows you to do just that. No obligation. If you think you got good value from reading this free magazine and you would like to contribute the cost of a cup of coffee, I can put the donations towards an upgrade for this 15yo laptop.



Arduino vehicle using a TV remote from Brian Neale - Aust



RoboDog from Fabian Kaufmann - Germany

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Show us your Meccano room

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In this issue 3 model plans!

# ROBODOG

# LET US SPRAY

by

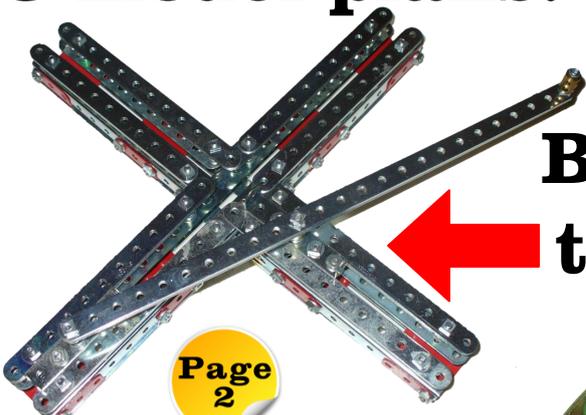
Douglas Hedgley

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## GOOD IDEAS DEPARTMENT

### Build this and this and this!



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Do Nothing Machine from Edmundo Veiga - Brazil



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This month's Meccano boy is James Plicio - UK

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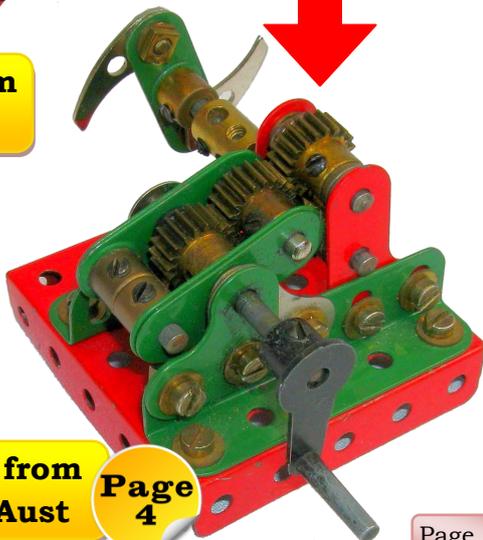
### Fireside Fun

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Plus so much more!

One Way Drive from Graham Jost - Aust

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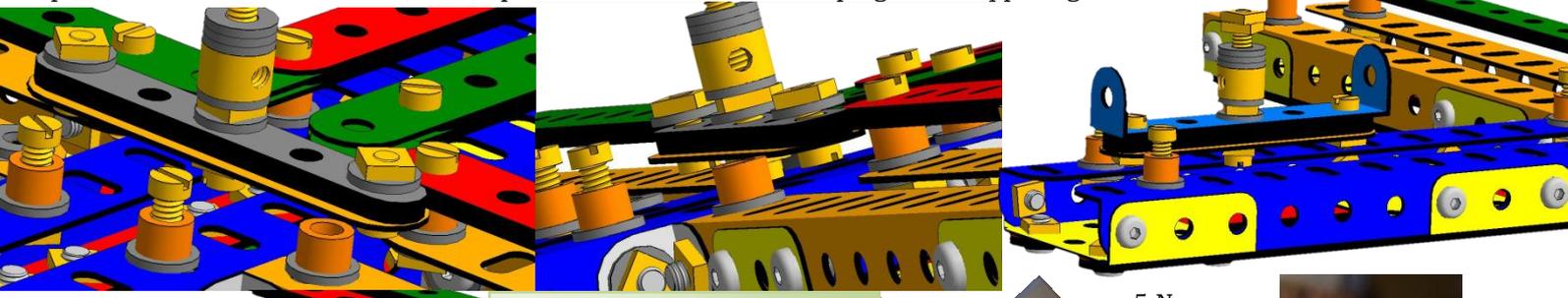
# Do Nothing Machine

Edmundo Veiga  
Brazil

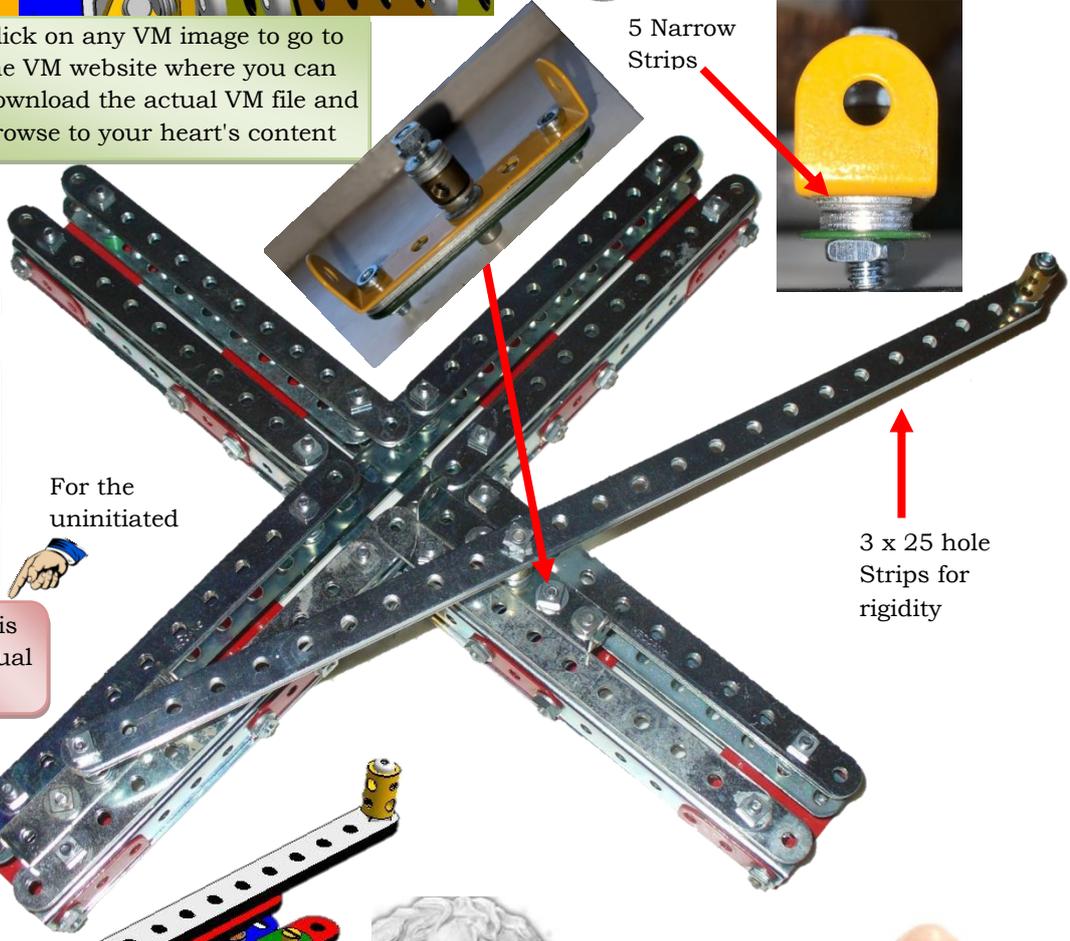


There's a wooden model of a machine called a Nothing Grinder but the name is a bit of a misnomer because as you can see in the video at the bottom of this page, it's actually very useful in understanding the maths of calculating circles and ellipses. I decided to build this machine in Meccano.

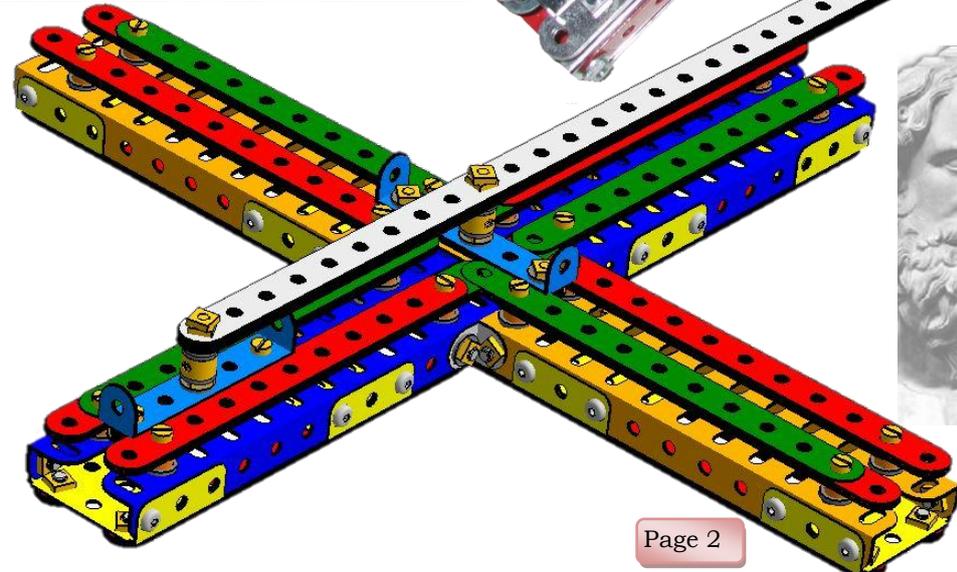
A main concern building it was to obtain a smooth movement, without binding, of the 2 sliders. With this purpose in mind, I built the rails with 4 superposed strips overlapped one hole intending to obtain at the central corner a meshed vertex interlacing the strips of 2 orthogonal rails when they meet. Those rails are assembled parallel to each other spaced of a width slightly wider than the one of narrow strips. To do so I held the rails on bolts, elevated by a small spacer to clear the trajectory of the slider, and attached them on the oblong holes of the angle girders of the frame below, displaced inward to leave the referred gap of almost a narrow strip width. The slide was built as a sandwich stacking a 5h strip on the bottom, 5 x 5h narrow strip layers and a 5h double angle strip on top. The use of the 5h DAS on top of the slider is intended (with its square extremities rounded upwards) to help the slider to cross the central interruption of the rail without bumping on the opposing rail's corners.



Click on any VM image to go to the VM website where you can download the actual VM file and browse to your heart's content



VM is Virtual Mec

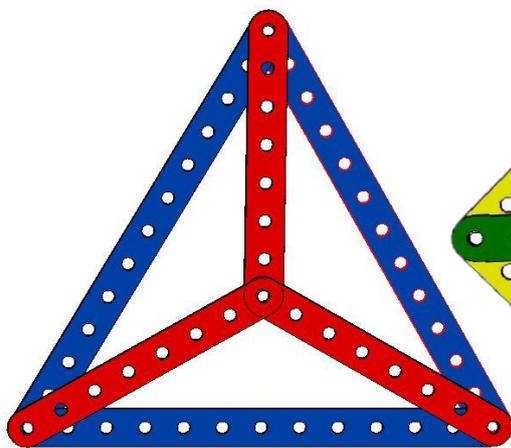
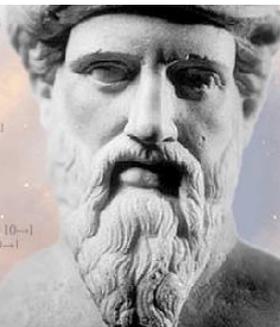
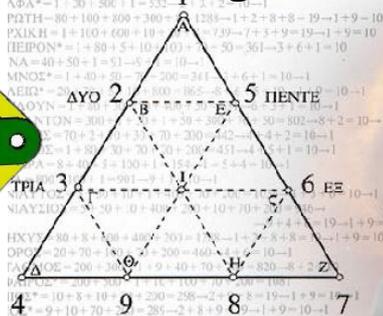


Click on photo or this link.

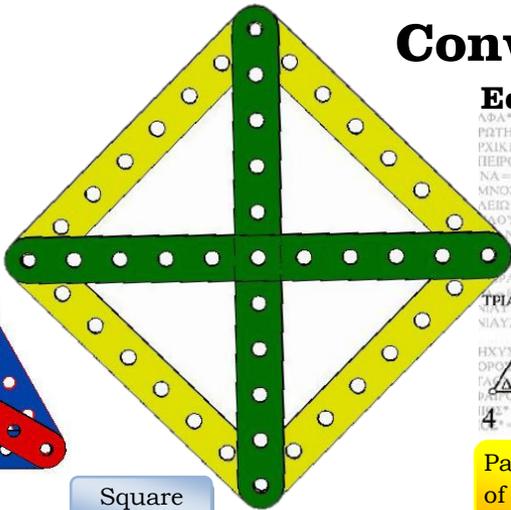
<https://youtu.be/7Fn-26Jmi5E>

# Convex Regular Polygons

Edmundo Veiga

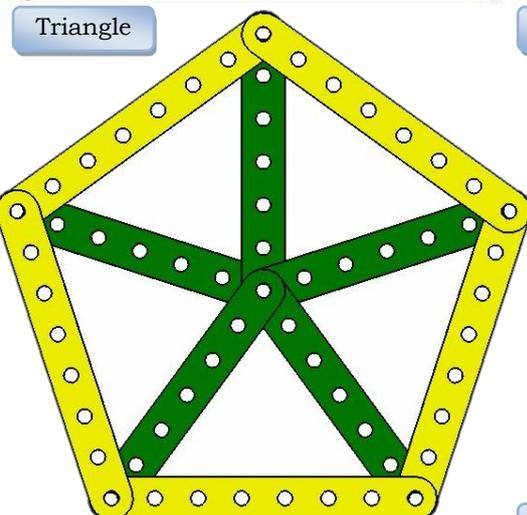


Triangle

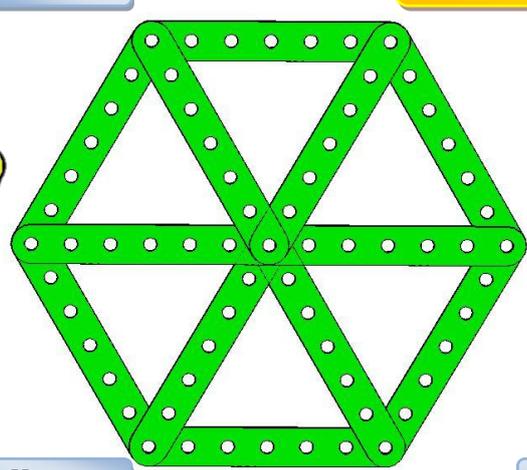


Square

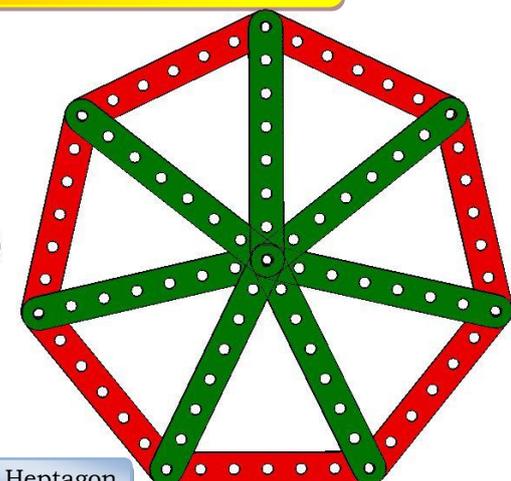
Part 36c is NOT required to make any of these shapes from standard parts.



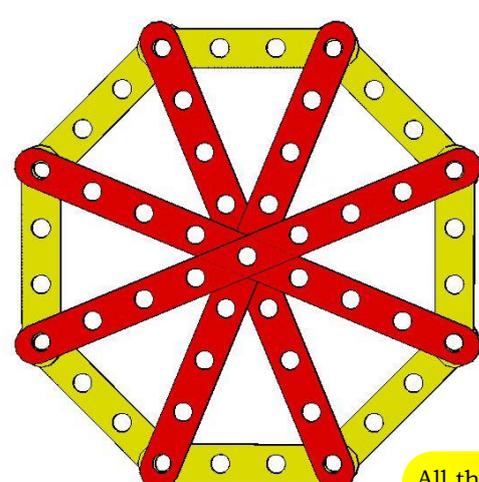
Pentagon



Hexagon

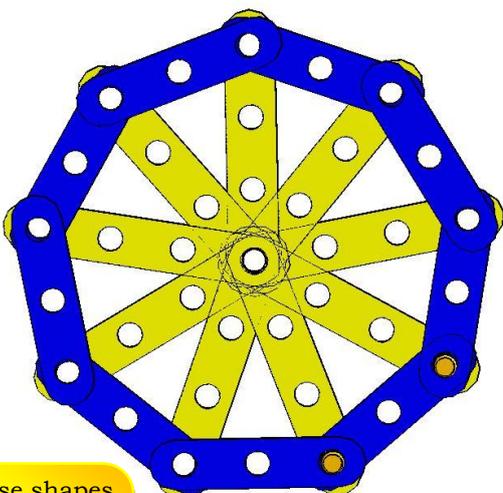


Heptagon

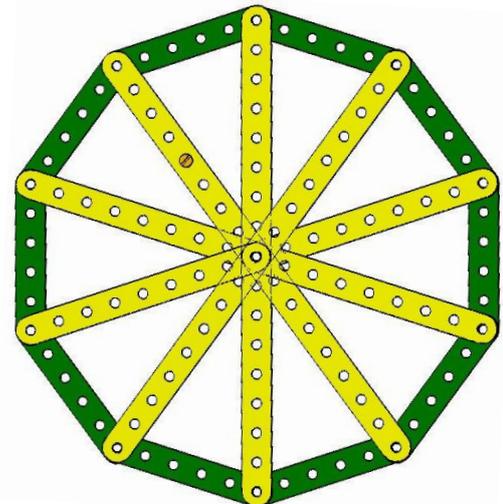


Octagon

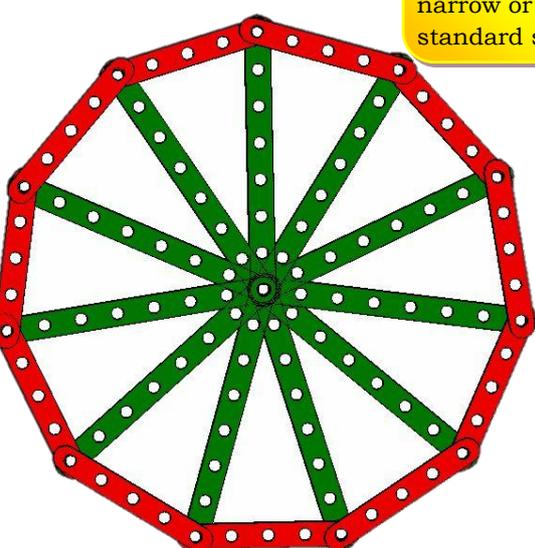
All these shapes can be made from either narrow or standard strips



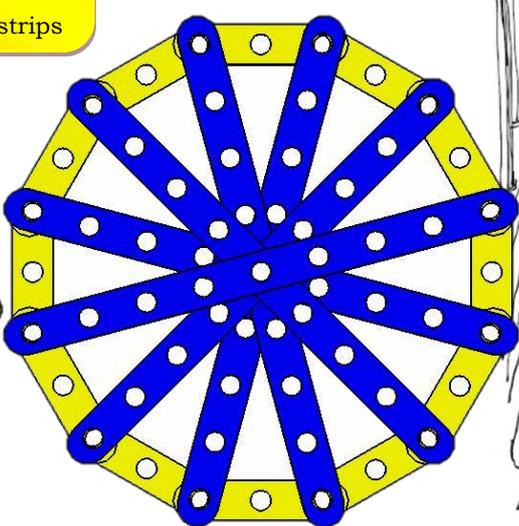
Nonagon



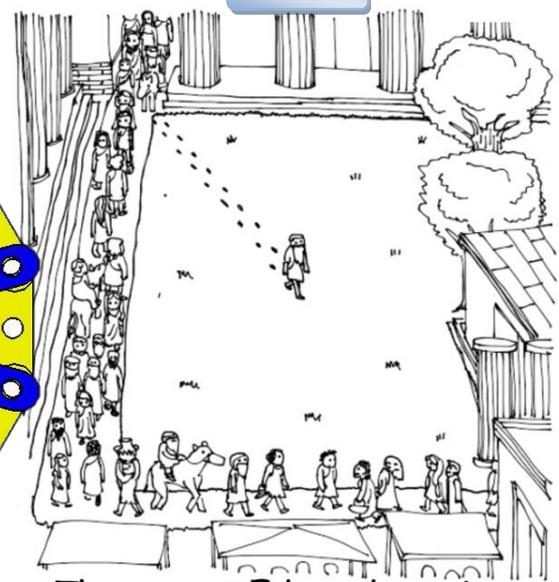
Decagon



Undecagon



Duodecagon



There goes Edmundo again. Always off on his own tangent!



Humpty Dumpty by Mary Jost

**Graham Jost shows us how to build Tony Darrah's One-Way drive**

My 1st attempt used Flat Girders. I must have been short of Corner Brackets.

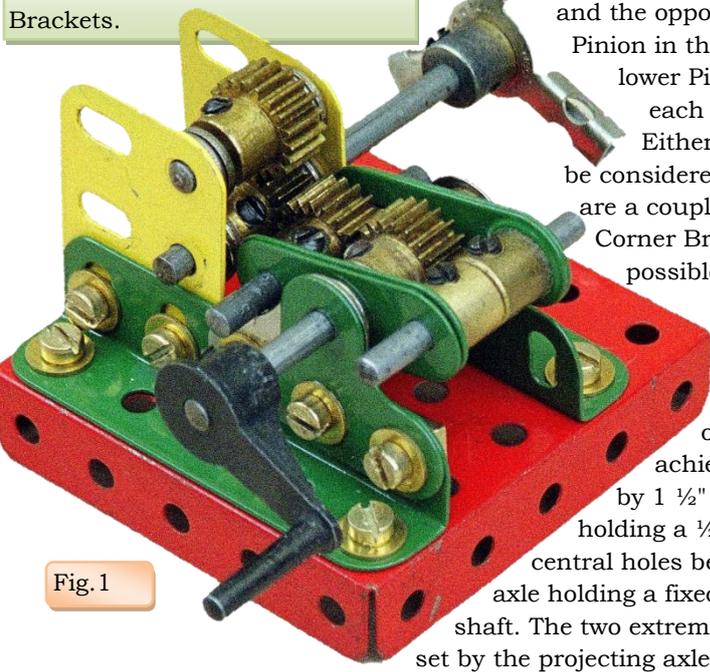


Fig. 1

The mode of operation is deceptively straightforward. The cradle surrounding the driving Pinion rocks clockwise when the handle is turned clockwise, Fig. 2, and the opposite for anticlockwise, Fig. 3. The driven Pinion in the cradle thus engages either the upper or lower Pinion in the vertical stack, actually driving each of those shafts *in the same direction*.

Either the upper shaft or the lower one can thus be considered the output shaft. In construction, there are a couple of points to note. First, the upright red Corner Brackets are fastened as low down as possible in the slotted holes of their Angle Girders. Secondly, the pairs of 1" Corner Brackets are fixed as high up as possible in their slotted holes. We are aiming for the input (crank-handle) axle to be at a height midway between the two output pinions, and the slotted holes of the Angle Girders allow this to be achieved. The rocking cradle is formed from two boss-to-boss Cranks edged by 1 1/2" Strips (to override the slotted holes in the Cranks), holding a 1/2" Pinion in its end holes. It is mounted by its central holes between the 1" Corner Brackets, the axle holding a fixed Pinion. This is the input driving shaft. The two extreme cradle rocking limits/positions are set by the projecting axles of the cradle. These engage either

Part No	Description	Qty
6a	Strip 1 1/2"	2
9d	Angle Girder 2 1/2"	2
17	Rod 2"	2
18b	Rod 1"	3
26	Pinion 19t	4
37a	Nut	14
37b	Bolt	14
38	Washers	
62	Crank	2
133a	Corner Bracket	4
133b	Corner Bracket	2
	Base Plate	1
	Crank Handle	1
	Indicator of choice	1

of the concave radii of the 1" Corner Brackets; it's a very neat "automatic" solution requiring no further action. I have used this drive in models that required a one-way drive, most recently in Mary's Humpty Dumpty where the tableau

needed to rotate in one direction, and not backwards!

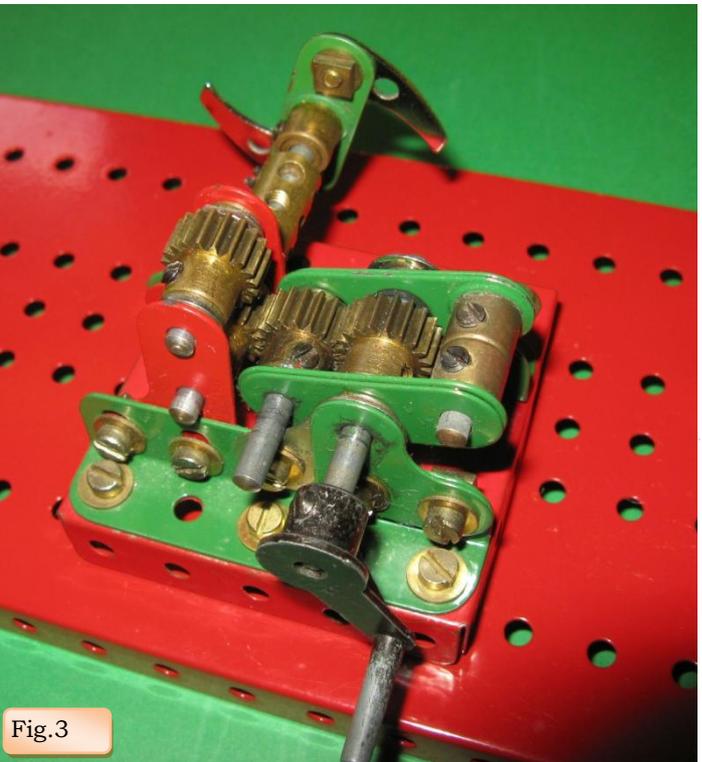


Fig. 3

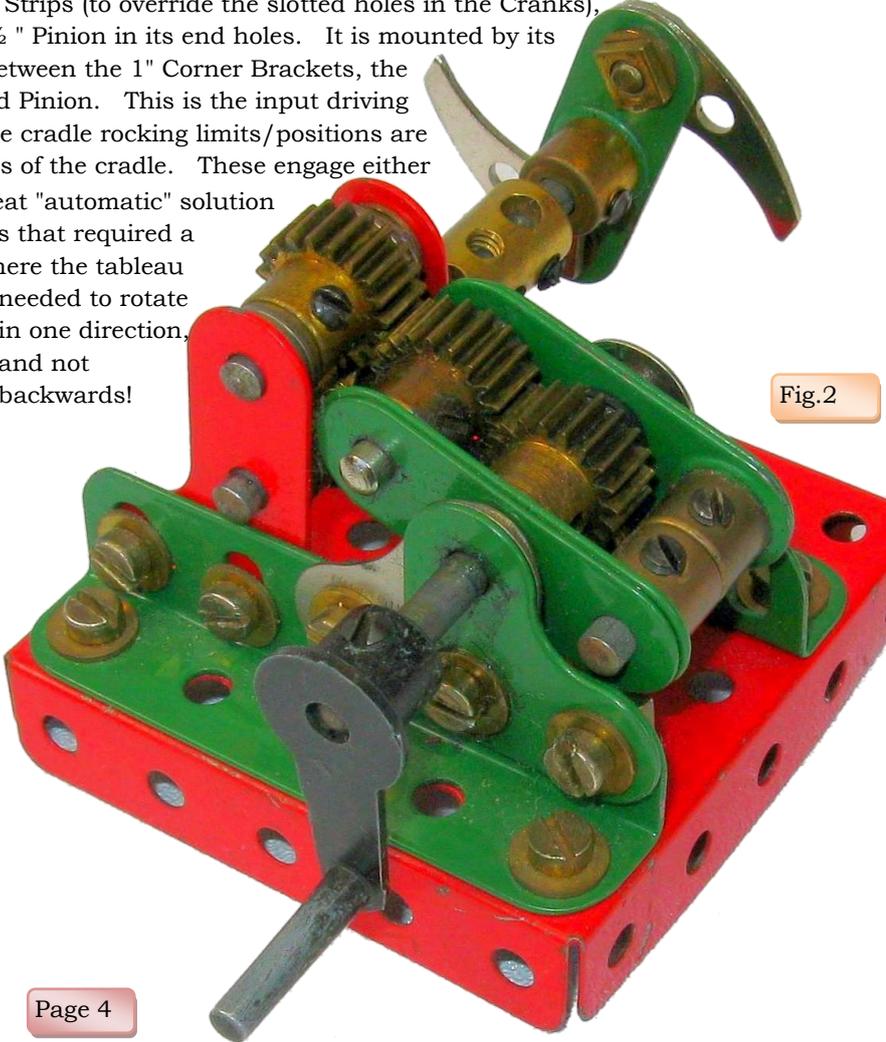


Fig. 2

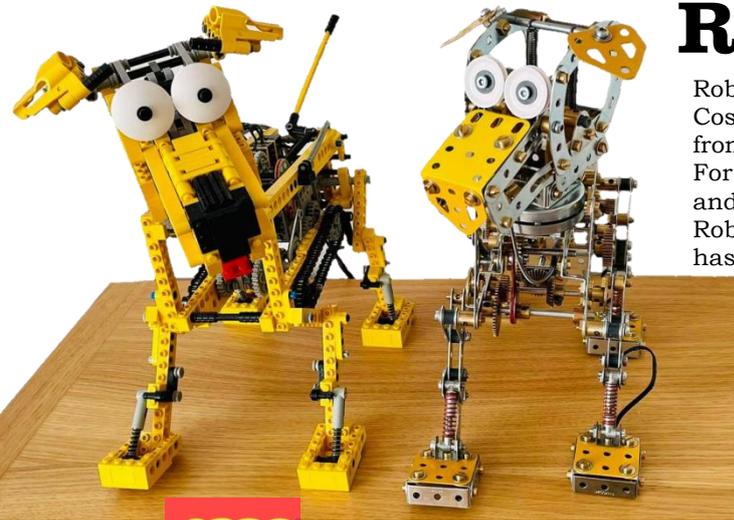
# RoboDog by Fabian Kaufmann

Germany



RoboDog is actually a replica of CosmoDog, originally a creation from the 2000s. CosmoDog is made of LEGO TECHNIC. For the most part, it is still built "with knobs", has 3 motors and is controlled by a controller that can save 50 steps. RoboDog does not have this controller and therefore only has to get by with one motor, which isn't a bad idea

considering the expected weight, because RoboDog weighs 1.7kg. CosmoDog weighs only 0.6kg with the same size. The motor and the gearbox are located in the back for better weight distribution and as a counterweight to the head. The construction principles are the same for both robots. To save weight, they have a light and rigid frame with RoboDog made of 15 hole Strips on the long sides with 7 and 5 hole Strips on the head and tail end. Sufficient stability is achieved by inserting right angle pieces at just one of the four corners. The only right angle is at the tail end of the robot and that's where the two pieces are built in. The frame also defines the outer body shape at the same time.

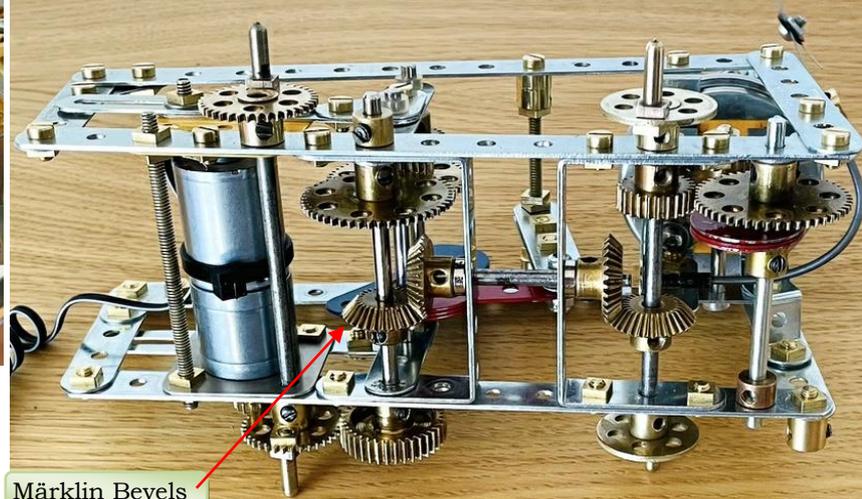
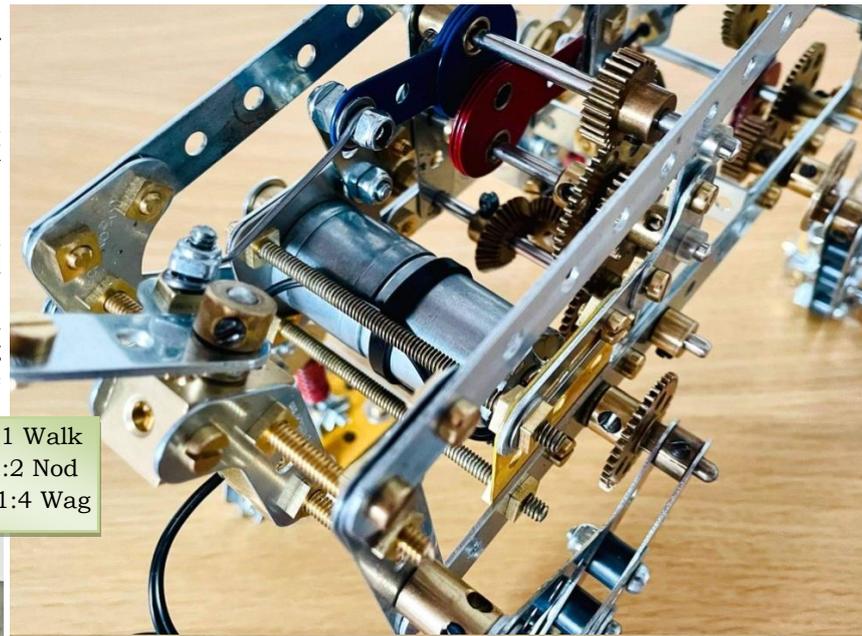


There is also a motor and transmission block in the rear that uses the lower 15 hole Strip as a base. For weight reasons and because of the better view of the transmission, there is no fairing for the time being. Maybe I'll add cladding later if I have enough light flexible panels in UK yellow. While with CosmoDog made of LEGO the three motors for running, nodding head and tail wagging are combined. As well as turning the head each has its own gear ratio. RobDog has only one motor that has to drive all functions. It was therefore necessary to incorporate translations for the various functions. In order to create a certain liveliness, the functions of wagging tail, nodding head and turning head should not all run at the same speed but rather at different speeds. In the transmission, the ratio is doubled twice in the three levels:

Lower level: 1:1 Walk  
Middle level: 1:2 Nod  
Upper level 3:1:4 Wag



Märklin 38t Gear



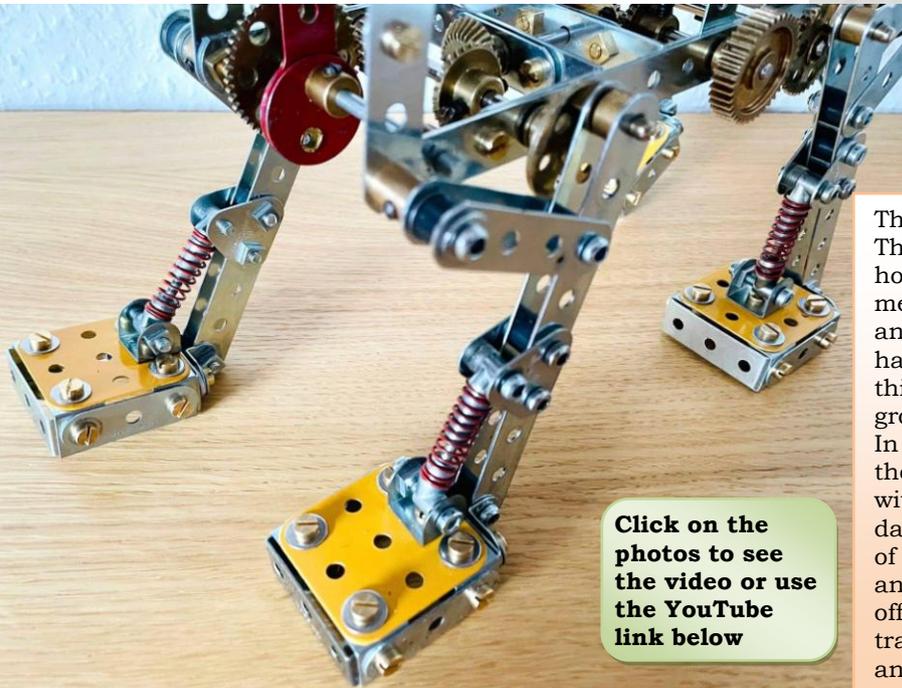
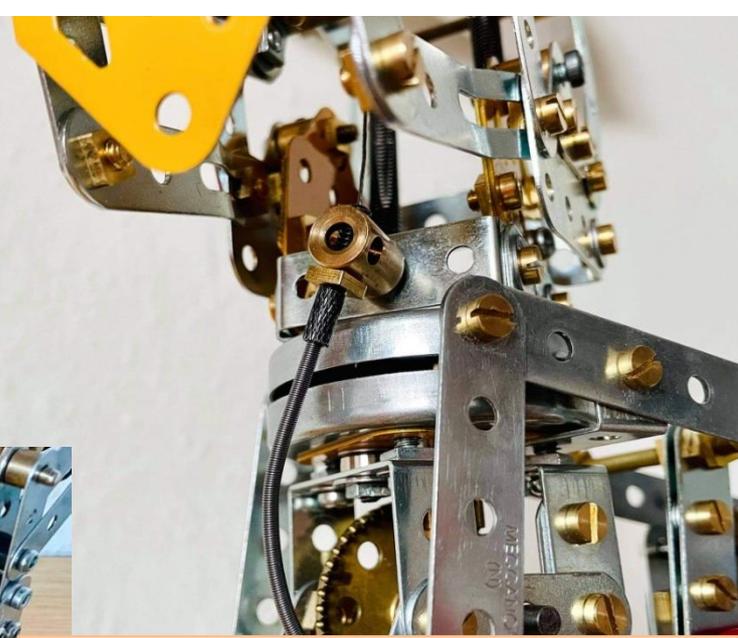
Märklin Bevels

I installed small 130a Eccentrics instead of crankshafts for the RoboDog. The installation of these Eccentrics allows the use of continuous axles. One Eccentric each converts the rotary movements of the gears into an oscillating movement for wagging the tail (blue) and nodding the head (red).

The turning of the head is driven by the front legs in the frame below the head. The first drive here is 2:1 ratio to slow gearing. Then the third eccentric (red) drives a 50t Contrate with its approx 12mm stroke, which in turn acts on a 19t Pinion. The relatively small stroke movement of the Eccentric turns into a rotary movement of approx 120°. The roller bearing was necessary to be able to carry the relatively heavy head. The 137 Wheel Flange fits exactly between the 15 hole Strips on the side of the frame. This diameter is already quite small for a roller bearing, so I decided to use a 213a 3-way Rod Connector without Boss in combination with the smallest Pulleys as a turnstile. However, the rollers do not run on the flange, as is usually the case, but within it. As a result, they disappear completely in the two bearing shells. Since the small Pulleys do not have the required diameter to fill the space between the two Wheel Flanges, a 20a 2" Pulley was used as the upper hub.



The Bowden cable in this construction is responsible for nodding the head and ensures a flexible connection between the body and the rotating head. It transfers the oscillating back and forth movement of the red eccentric from the second level of the rear gear into the head, without restricting the head turning right and left. A Threaded Coupling that is free to rotate is used to mount the Bowden cable on the upper part of the roller bearing. The train simply runs with every head turn and still has enough freedom of movement to do its work (pulling the head down against the force of two tension springs) smoothly. Running is a relatively complicated thing. The overall weight and weight distribution of the model have a great influence on the efficiency and smoothness of running. Likewise, the leverage and length ratios of the legs and the mobility of the feet. Ultimately, it is trying out different combinations that will give you the best result.



Click on the photos to see the video or use the YouTube link below

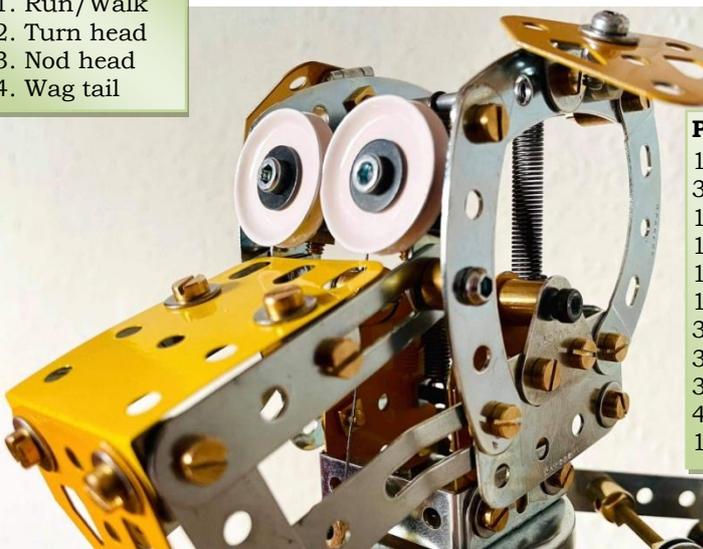
The Märklin gear 10438 with 38 teeth is important here. This is also available in Meccano, but without the six holes, of which one per leg is turned into a crank by means of a Threaded Pin. The crank arms for the front and rear legs are offset by 180° on the right and left halves of the body. This creates a so-called cloister. With this gait there are always two diagonal feet on the ground in the living model (front left with rear right, etc). In the case of the robot, which has no sense of balance, there are three legs because it tilts alternately to one side with every step. To mitigate this tilting, additional dampers are built into the feet. They restrict the mobility of the feet somewhat so that they do not drag on the floor and, on the other hand, provide support when "rolling off". The legs behave like inverted connecting rods, which transfer the circular movements of the cranks into an up and down or back and forth movement.

The 4 and 5 hole guide arms for the front and rear legs are also part of the external appearance, because they indicate the body shape of the shoulder blade and hips. I realized the mechanical connection from the rear to the front legs using 30t Bevel Gears in the middle of the frame. The direction of rotation and the alignment of the axles change twice, but I didn't really want to have more externally visible gears or even a chain. The Bevel Gears are from Märklin and work very well. The head is actually quite simple. It is based on two 103g Flat Girders on the sides and a 4 hole strip in the back. These form a square that is exactly dimensioned so that it fits over the base of two 9f Angle Girders and two 48 Double Angle Strips on the roller bearing. The side profile is characterized by 3 pairs of Curved Strips for the shape of the head and two 5 hole strips on each side as a snout. A bearing made of two Trunnions 126a in the centre of the head acts like a kind of swing for the flexible connection to the body and enables the nodding movement. Since the Bowden cable, which is responsible for nodding the head, can only pull the head forward, two tension springs in the back of the head take over the movement backwards. I had to rework the original head several times because it was too heavy and had a negative impact on the gait. By leaving out some Plates and Angle Girders, I was able to reduce its weight. As a result, it is no longer so front-heavy. The tail, which moves at four times the speed of the input shaft, is attached to RoboDog's 'butt-end' at a 45° angle. The blue Eccentric takes care of the tail wagging by means of a guide lever and a short piece of wire that I have bent into shape and provided with two eyelets. The original plan was to integrate the power supply for the 12V motor into the body. Unfortunately, the space was so limited that I could even buy the smallest Li-Ion battery. My plan is to integrate a small step-up converter for use with a 9V battery.

**Reductions** Motor -> gearbox: 15:38 rpm on the lower level  
 Lower level: (Walk) 1:1 [38:38 teeth] (Turn Head) 2:1 [25:50 teeth]  
 Middle level (Nod Head) 1:2 [50:25 teeth]  
 Upper level (Wag Tail) 1:4 [50:25 + 50:25 teeth]

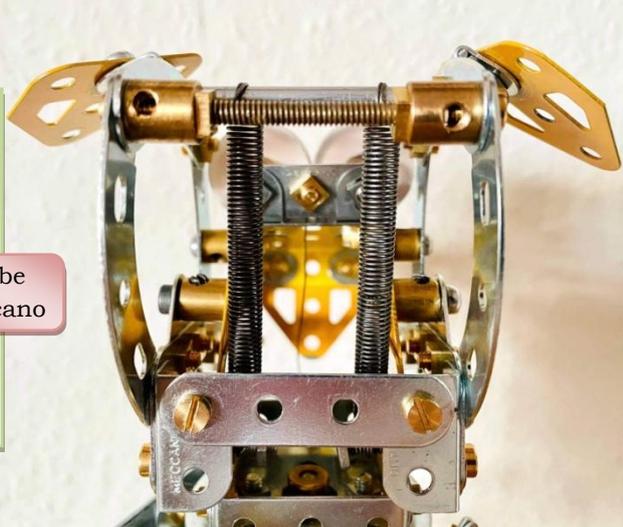
**Movements**  
 1. Run/Walk  
 2. Turn head  
 3. Nod head  
 4. Wag tail

YouTube <https://youtu.be/jlkykP5UoU>



**Parts**  
 1 Motor 12V/60 rpm  
 3 Eccentrics 130a  
 1 Bowden cable  
 16 gears:  
 1x 15t  
 1x 19t  
 3x 25t  
 3x 38t  
 3x 50t  
 4x 30t Märklin Bevel  
 1x 50t Contrate

Can be Meccano



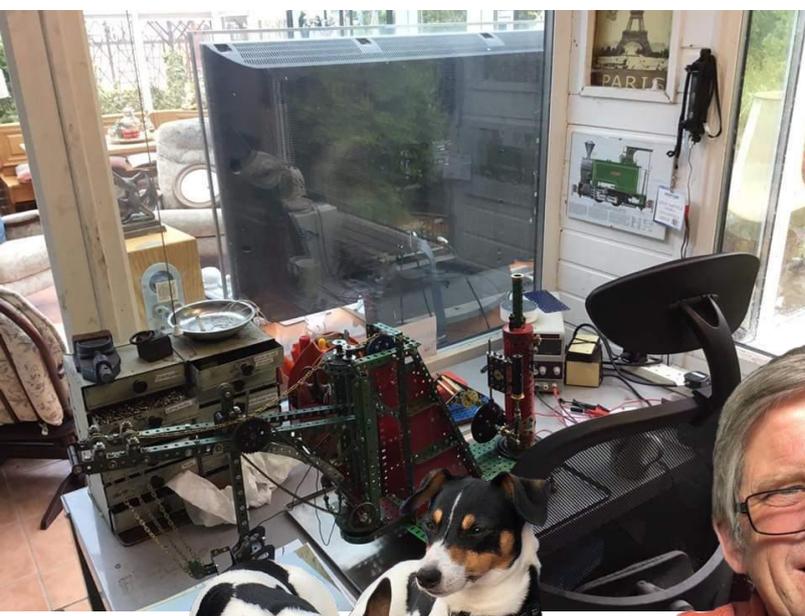


# Show us your Meccano room



Gary Treible - USA

Chris Clinckx  
Belgium



Bill and Ben

Leslie Chatfield – UK has recently redesigned his Meccano room. There is also a new lathe and belt lisher for cleaning and modifying Meccano parts. Les is helped by Bill and Ben.

# FROM OUR GOOD IDEAS DEPARTMENT



John Ozyer-Key in the UK made this clever device for Richard Payn to use on those difficult hardened tyres that refuse to go onto the pulley.



Edward Pritchard UK has suggested this improvement to the Meccano T shaped hex key. Not only do you get 2 for 1, you also get a nice short hex key for those tight spots.



Don't throw out your Meccano broken or bent pulleys! You can make good collars from them. It took me about an hour to drill the pulleys off and then put them on a rod, clean them up with a Brillo pad and then polished them with a bit of Brasso. They will be of use for something. – Rob Kirk UK

Another good idea from Richard Payn. How to make a threaded Pinion from the rather uncommon 95t plastic Gear from the Space X-Plorer outfit. Part number 927cp.

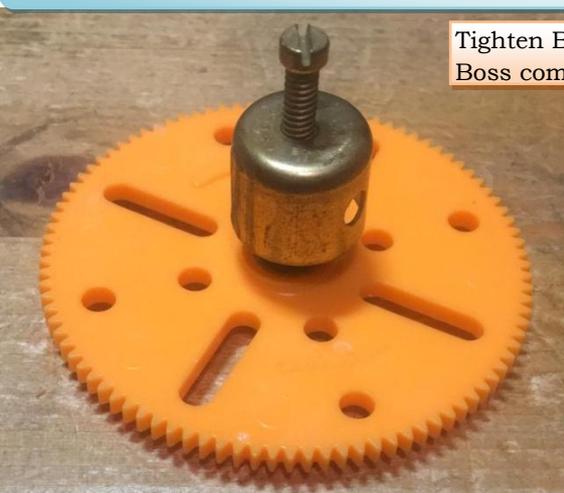


Take the Threaded Boss out of a part 927cp plastic Gear by using a part 164 Chimney Adaptor.

Take the Boss out of a plastic Pinion in a similar way as shown.

Tighten Bolt Boss comes out

Place the plastic Pinion on top of the Threaded Boss and tap gently.



Ta Dah!

# Outstanding models



Nick Hollinshead – UK built this Thunderbird 2 from the current outfit.



Bill Quayle - Canada Garage Crane model 2.8 from the 1974 manual.

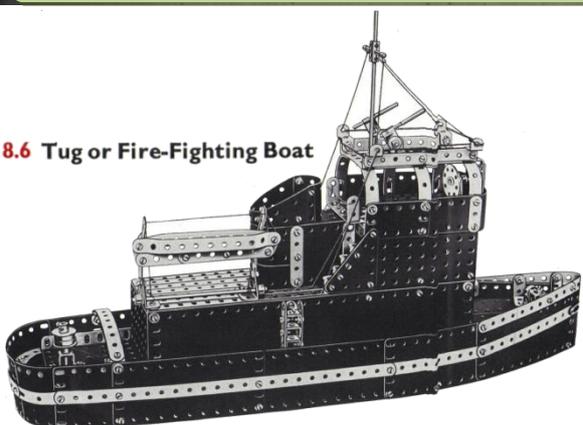
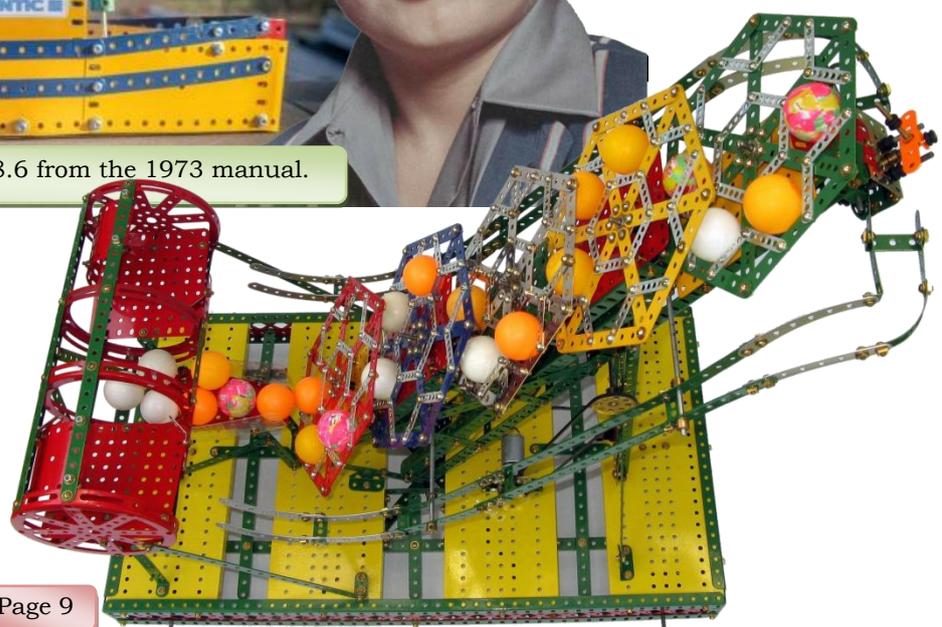


Rob Kirk – UK and his Meccano men paid particular attention to detail with this welding set for Rob's workshop. Click the image to see the video.



Chris Clinckx – Belgium built this Tug Boat model 8.6 from the 1973 manual.

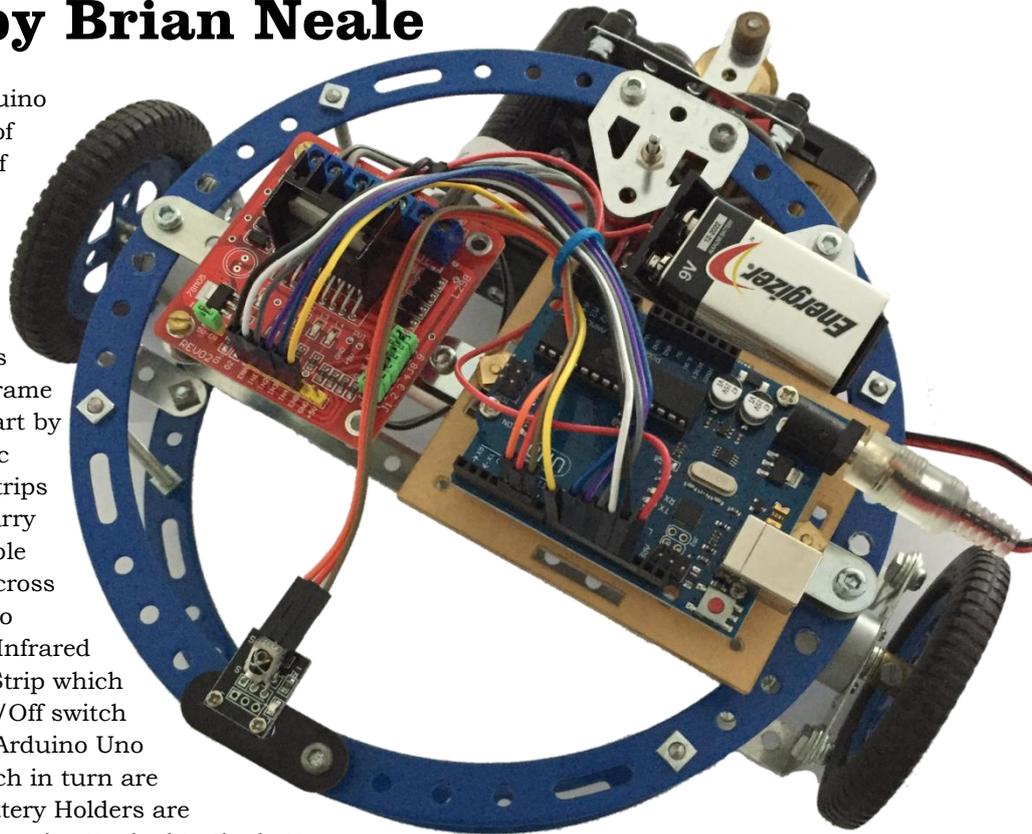
Graham Jost – Australia built this Hexcalator from a model originally built by Keith Edwards. Click on the image to see it go!



8.6 Tug or Fire-Fighting Boat

# Arduino Vehicle controlled using a Samsung TV Infrared remote by Brian Neale

My adventure in combining Meccano and Arduino hasn't been at all easy, now after six months of rebuild after rebuild there is a faint glimmer of light at the end of the tunnel (hopefully not a freight train coming my way). My latest project is a Arduino Vehicle which is controlled using a Samsung TV Infrared remote. It uses an Infrared Sensor Module for receiving the signals from the remote which in turn controls the Arduino Vehicle moments. The Meccano frame is built using two 145 Circular Strips held apart by four 80c Screwed Rods held in place by 16 37c Nuts. The bottom Circular Strip has two 1b Strips attached each side of the centre hole which carry the motor mounts. I used two 12VDC Reversible Gear Head Motors. A third Strip is attached across the top Circular Strip to carry the Arduino Uno Controller and the L298N Motor Module. The Infrared Receiver Module is fixed on a 503 Insulating Strip which is attached on the top Circular Strip. The On/Off switch and 9V Battery Holder used for powering the Arduino Uno are mounted on two 126a Flat Trunnions which in turn are attached to the top Circular Strip. Two 6V Battery Holders are attached to a No 2 Perforated Strip which in turn is attached to the bottom Circular Strip. They are wired in series to give the 12VDC necessary to power the motors. Note that it is not necessary to have a separate 9VDC battery to power the Arduino. It can be powered from the 12VDC supply.



The IR sensor to Arduino

IR Sensor	Arduino Uno
GND	Pin 6
VCC	Pin 5
Signal	Pin 4

The L298N to Arduino

L298N Motor Module	Arduino Uno
ENA	Pin 13
IN1	Pin 12
IN2	Pin 11
IN3	Pin 10
IN4	Pin 9
ENB	Pin 8

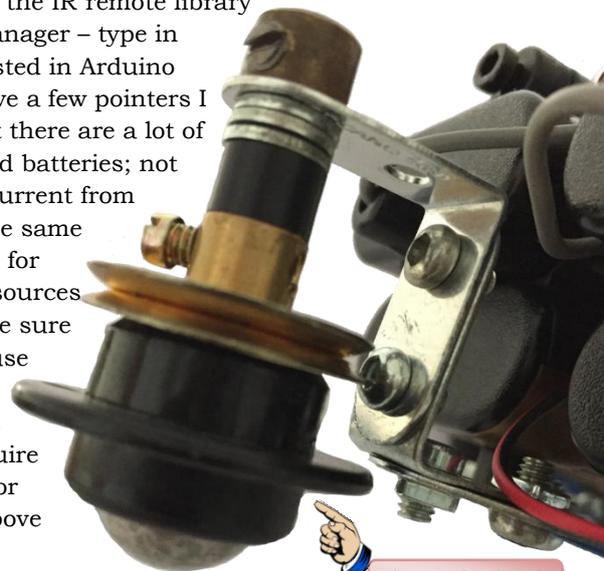
Connect the two Motors to the L298N as marked. Connect the Battery 12VDC positive to the VMS connection on the L298N and the negative from the Battery to the GND connection on the L298N.

Connect the GND on the L298N to a GND connection on the Arduino Uno. Connect the 9VDC plug into the Arduino Uno. I used a double pole switch in circuit to control the 9 & 12VDC power. Now connect the IR Sensor to the Arduino Uno. Every IR Remote Control transmits different HEX codes, so we need record the codes from your remote. The sketch can be uploaded from <http://www.nzmeccano.com/image-156528> Once uploaded, make sure the power is disconnected and the USB cable is connected between your computer and the Uno, open the Serial Monitor and press the buttons on your remote control. You will see the code from each button on the Serial Monitor – I used the up/down arrows.

Lastly it is necessary to balance the vehicle by fitting a third wheel. I purchased a "MoveIt 16mm Ball Transfer Pack" from Bunnings part number I/N 394034 which has four in the pack. I glued one to a 22 Pulley Wheel with Boss which held an 18b Axle Rod spaced and held in place through a 12a Angle Bracket by a 59 Collar. A second 12a Angle Bracket is bolted to the first and then attached to the bottom Circular Strip. With the Arduino boards in place the next job is to connect them.



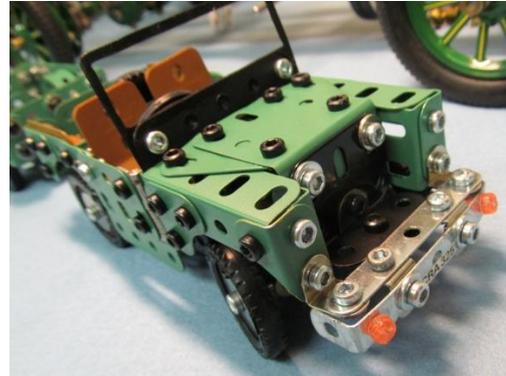
The last job before uploading the code to the Uno is downloading the IR remote library via the Arduino IDE. Go to Tools – Manage Libraries – Library Manager – type in IRremote then select and install. For those of you who are interested in Arduino and still reading and are not too confused by my ramblings I have a few pointers I would like to share with you. They may sound very primitive but there are a lot of basic problems that can cause your project to fail. Weak or Dead batteries; not enough current to power the motors, motors can draw a lot of current from your batteries. Making sure all Arduino circuit boards share the same ground connection. Projects that use separate Battery supplies for motors need to have the Ground Connection of the two power sources connected. You can have many Arduino Sketch problems, make sure all code you enter is spelt correctly (my number one problem) use correct capitals for all key words, also make sure semicolons and parentheses are in the correct place. One problem I learnt early was missing or incorrect Libraries as some Sketches require those to be in specific locations – for example when using Motor Shields, Ultrasonic Sensors or Remote Controls. I hope the above helps and doesn't put you off experimenting with Arduino. I assure you it's worth it!





# LET US SPRAY

by  
**Douglas  
Hedgley**



This article was triggered by a Facebook information interchange between myself and the builder of that magnificent Battleship and SkegEx winner Steve Briancourt, concerning the best way of stripping and painting Meccano pieces, plus an editorial request. I agreed, on the understanding that I'm not, nor profess to be, expert on this matter! I only relate what I do to get a result that satisfies me, so on that basis, here are my methods.



Back in 2017 I wrote an item about the whys and why-nots of painting Meccano parts for model building, adding in passing that, as a collector of old sets, I would never, ever, re-paint a perfectly good or rare part. So in summary it basically comes down to two reasons.

1. To use up scruffy but otherwise OK parts, of which the average Meccano user has many and are ideal for stripping and painting into a new lease of life.
2. To add realism to a model of a known prototype; car, ship, loco, whatever. The two schools of thought on this are: A Meccano model should be presented in Meccano colours or: a model of a Land Rover for example, should be built in the correct colours as far as possible, because wrong colours will detract from what could be an otherwise realistic modelled miniature. So, assuming you have decided to paint your parts, this is my procedure.



**STRIPPING** The first step is the removal of old paint from the parts and here you will find that that a lot of the old Meccano enamel paint will almost fall off. However, there will be some which will resist your efforts and fight you every step of the way. These tend to be the more modern powder coat which, regardless of what's frequently said about modern parts, is often a seriously good and tough finish. I used a very well known make of paint-stripper back in the 80's, when I was restoring an old WW2 Harley Davidson, and with just an initial thick coat of stripper followed by with another lighter coat, would remove 40 year old oven baked black frame paint with ease. However, when I came to use the modern version, I found it insipid and weak so it may have been modified to comply with modern domestic use. On the 'Evening Star' locomotive project I needed to strip and paint several hundred parts and there was no way that I was going to wire brush every part, too much like hard work! Living in the UK I was able to use a product called 'No-Nonsense semi-liquid Paint Stripper' sold by Screwfix and which I found to be excellent! *ALSO, and this is important!* They sold packs of 100 disposable rubber gloves at a sensible price and I really, really do suggest you buy a pack! The stripper did not seem to burn the skin when the inevitable splash landed, but on principle, you must protect yourself including the use of a pair of safety goggles. My procedure was to load up a Tupperware container with parts, pour in a generous amount of the stripper, stir everything about with an old paint brush for a minute or two and then leave overnight, having first made sure that the stripper had fully penetrated between the parts, especially the flexible plates which tend to want to stick together. I could have as many as 100 parts all swilling about in the 'goo' but no matter. In the morning I would fill two other plastic tubs with cold water and then go through the boring procedure of wiping (Not rubbing!) the stripper off each part in turn, using steel wool and then popping them into the adjacent water container. Once this was done, I would then, using an old cloth to wipe them, transfer them to the other container of water, at all times making sure that they remained under water. You need to minimise the air contact with the bare metal. Any of the very few parts that still had paint on them were put back in the stripper container with the next batch. As you prepare the next batch, you will have to judge whether the stripper in the tub is saturated in old paint from the first batch. If it is, renew it, as saturated stripper is not going to do much of a job for you on the next batch! You must use plenty of stripper, don't be stingy with it and you must give it time to work! Overnight is good. Remember, it's saving you a lot of hard physical work! Finally we need to get these parts flash dried as soon as possible so that the inevitable rust doesn't get a chance to get going. This I achieve by wiping the parts on a piece of towelling as I remove them from the third tub of water and popping them into a little pre-heated oven I have in the workshop. As soon as the surface damp has been driven off by the heat, the parts will stay surprisingly clear of rust for several weeks, although getting them covered in a primer as soon as possible is best practice of course.

**PAINTING** Now we come to painting which roughly falls into three methods, brush, aerosol can or air-brush. Brushing is fine on small areas or certain types of models but to achieve good results you will have to be very good at 'laying on' the paint by brush and if there's a lot to paint, it's going to be very slow. Aerosol cans are great for the quick job and not too much area, and there are excellent spray cans available now with good strong colours and plenty of pigment, indeed Rob Kirk uses them to great effect on his models. There are however two drawbacks with spray cans. When painting a large area or numbers of parts, the pressure can weaken sometimes because of freezing. Also, if persisted with just that bit too long, you may end up with splatter on previously painted work. The other drawback can be cost, with individual cans being quite expensive, especially if used in large quantities. Spray painting although initially expensive to set up compared with other methods, long term should work out quite reasonable. I feel it's the most versatile way of painting the models, going from covering large flat areas (flexible plates for example) very quickly to very fine work when adding detail. This is the method I use and below is the equipment I currently use.



**COMPRESSOR** Again, nothing too fancy, all you need is a compressor that will keep up with your spraying and maintain the pressure (hence the air reservoir type) Mine is an excellent little unit made by RIPMAX which I bought off eBay for about £95. It easily handled all the spraying I did last summer and has lots of pressure.



**AIR-BRUSH** There is no need to spend large amounts of money on an air-brush because we are unlikely to be spraying minute patterns or drawing on a Meccano model. You just need an air-brush that will give you a reasonable spray time and reasonable adjustment to paint spraying quantity. The gun I have is just a simple, bog standard Badger brand with the glass container underneath. I wouldn't recommend the type with the little container above the air-brush as they're really for very fine work and don't hold much paint. You'll be forever filling up the paint container.

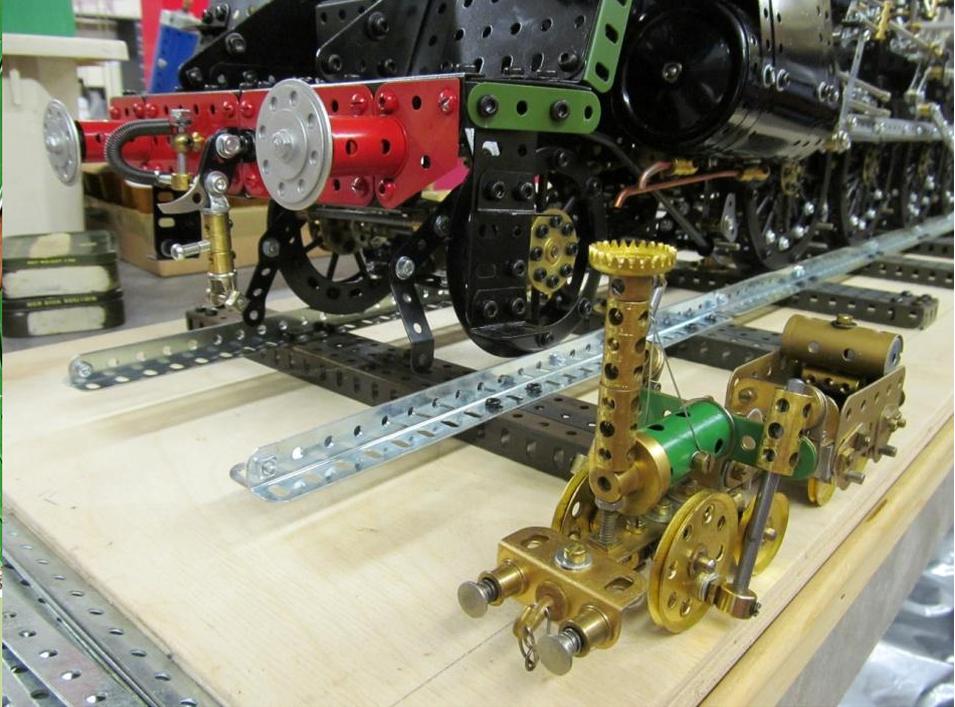
For my airbrush I use 30psi but it all depends on the thickness of your paint. Too thick and it clogs up completely.



**SPRAY BOOTH** I used to spray paint into a cardboard box but it was unsatisfactory on several counts. A good percentage of the spray comes back at you which ain't pleasant! Also any dust, flies, bits of fluff, cotton and grit blown into the air are immediately deposited on your freshly painted work, and if that happens to be gloss, it shows up like a sore thumb. In short, useless! I found a hardly used Sim-Air A3 sized Gloo-Booth for sale on eBay for £250 (£1,250 new!) The A3 size enabled me to get 24.5" angle girders onto the spray bed. They are very effective at removing fumes via the rear exit vent pipe and to the powerful extraction fans fitted. When spraying, I could have done so without a mask as nothing came back out! The bed of this booth consists of a thick, coarse maze of material which knocks the larger overspray elements out of the airstream and the finer elements are very effectively taken care of by a 20mm thick charcoal type filter underneath the coarse filter. On first try out using a strong green coloured paint, I directed the exit pipe into a clean white cardboard box and after several minutes of spraying, there wasn't a trace of colour to be seen in the box! I was mightily impressed! Being a total amateur at spraying I find it easier to spray parts lying in the horizontal position rather than the vertical, as you tend to get less runs when getting over-enthusiastic with the air-brush. Any particles in the air were drawn away from the work on the spray bed and ejected from the external vent. This booth suited my requirements to a 'T'.

**OVEN** Enamel paint will air dry overnight, BUT, will remain sticky for months. Even 3 months later, if you bolt together and then unbolt a couple of parts, chances are that they will remove the paint from each other. So, we have two choices. Firstly to buy a small cheap electric oven for about £40-£50 and after spraying, pop the parts into that. I found that pre-heated, roughly 20mins at 110C would do the trick. You should experiment with the temp and timings as too little won't harden the paint and too much will darken the colour or just burn it. Once you get used to it, it's a smooth rapid process. When the parts have cooled right down to ambient, you can assemble away to your heart's content. The second way of finishing the parts after spraying depends on the weather Gods. In the UK it has been known for the temp to drag itself over 15c and on occasion, to reach the giddy heights of 30c. Such a summer occurred the year just past, and I was able to 'cook off' several hundred parts in the back garden. If you can do this, it saves a bit of electricity and, as long as they face the sun directly plus you leave them for several hours, it will do the job nicely. They get surprisingly hot to the touch!

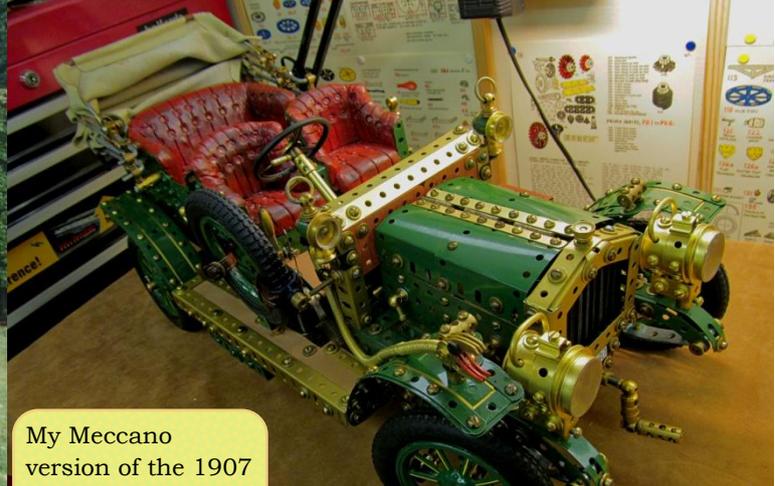




**SPRAYING TECHNIQUES** First and foremost, don't spray when it's too cold (5c or below) and don't spray when it's too hot. As I'm building a locomotive and want the correct colours, I bought my paint from <https://www.phoenix-paints.co.uk> who sell the whole range of railway colours, also as you would expect, all the correct thinners plus some transfers etc. On the perfectly dry parts I sprayed a white primer which I left overnight, followed up with the appropriate enamel colour. With plenty of pigment in a well-made paint, the single colour coat was enough. For top quality finishes, more and thinner coats is the way to go. However, strange as it may sound, you can have such a thing as too good a finish and the model begins to look more like a plastic toy than a representation of the original prototype. Using a locomotive as our example, a high gloss shiny finish would be wrong as when viewed up close, the paint and metal finishes are in reality quite coarse in places. Remember the original may have had a hand brushed finish in oil enamel paint.



I spray from about 4-6" (100-150mm) and at approximately 30/40 psi with enamel paint thinned down by about 20% thinners to 80% paint. I get a good coverage very fast, even with the little Badger airbrush. When spraying brass parts, you must use an etch primer (max 15psi) as the metal is naturally greasy and normal primer will not attach itself properly to the surface. On the other hand, do NOT use etch primer for normal steel parts as it is more difficult to spray properly and stands a good chance of blocking the airbrush. Just use etch primers where necessary. Finally, I tend to scale colour with the model. By this I mean that I will use a lighter shade of colour on the model than was used on the full sized prototype because using the original shade can make a model look too heavy and awkward. Not everyone agrees with this and that's fine, but it's wot I fink. So in summary; you will have to lay out a bit of money initially but if you can afford to set up the basic equipment, then when it comes to finishing a model, the world's your oyster. – Douglas Hedgley.



The original 1907 Armstrong

My Meccano version of the 1907 Armstrong painted by yours truly.

# This Month's Meccanoboy

## is James Plicio - UK

*I see you are referred to as both Sanitaigo and James. Why is that?*

I am Santiago but all my life I have been called James which in Spain is the same name.

*When and where were you born?* I was born in 1942 in a frontier town in the very South of Spain called La Linea near the British colony of Gibraltar.

*Where did you go to school?*

I went to a private school until the age of 15. I also attended private school to learn the English Language.

*Did you go to university?*

My school was good where I learnt a lot. I did not go to university but I had two years in a college. I wanted to learn how to be a mechanic, but things changed.



*Did you have Meccano as a boy?*

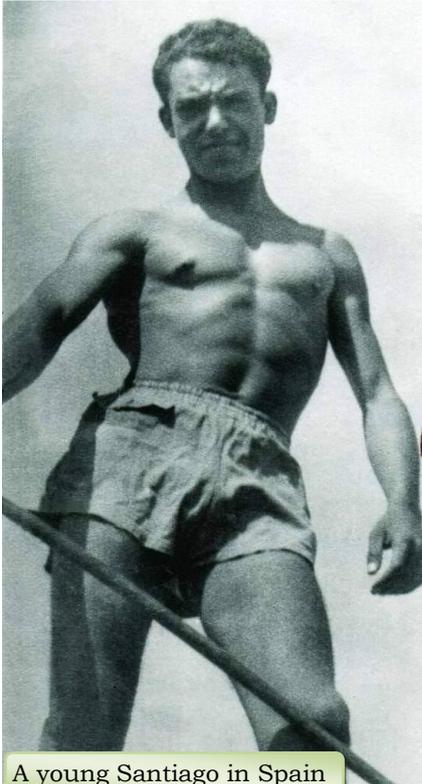
I used to get good toys, mainly British, from Gibraltar.

In January 1951 I was eight and a half years old when I got with my toys a Meccano set, perhaps an outfit no 3 or 4.

My father died a few months earlier and my mother bought it for me as she always did.

*Did you have any childhood friends who shared your passion for Meccano?*

I loved anything mechanical as well as ships, planes etc, and Meccano was my best toy for years. Children from the street used to come to my door and see me building the models from the manual and also dismantling them to build the next one but none of the others had Meccano.



From Wikipedia: Santiago is a Spanish name that derives from the Hebrew name Jacob, first used to denote Saint James the Great, the brother of John the Apostle. It was also the tradition that Saint James (Santiago) had travelled to the Iberian Peninsula during his life and was buried there. The name is also complicated in Spanish in that Jaime and Jacobo are modern versions of James.

*What was it like growing up in Spain?*

Growing up in Spain was not good after the Civil war but Gibraltar being British was great and prosperous. 15,000 Spanish workers worked in the Colony, so La Linea was a place where all these families were 100% better off than the rest of the country, so we have a great childhood, not depriving of anything. I learnt English and with Gibraltar being British I read and learnt many things about Britain. I developed an appetite to come and see England.



*Wife and kids?*  
I married in 1965. I had been in London and went to La Linea to marry my fiancé Maria. She was my girlfriend for six and a half years. She came to England shortly after with my mother and my Aunty to live here. We have 2 sons, 2 daughters and 8 grandchildren.

*When did you come to England?*

When I was 23. I arrived in England on Jan 30, 1965, the same day as Winston Churchill's funeral.

*What did you do for a living?*

I started in London with a company owning a few restaurants, some of them famous and popular, and after being there 3 weeks I was in charge of the main bar where we served customers breakfast, lunch and dinner. After 6 months I became assistant manager and head cashier. I was moved from The Sands in Bond Street to Piccadilly, where my bosses opened Hatchetts, a famous place which they converted into a pub, restaurant and the best Disco in London. This was in 1967 and I stayed there until 1978 when the place closed down forever.



With daughter Josephine in England

*Did your interest in Meccano influence your job?*

After Hatchetts closed down I bought a small newsagent shop, followed by a second bigger one later, something like a minimarket. Some members of my family worked for me as well until 1999 when I sold the lot and retired. In 1965 I was walking along Piccadilly St and saw a Meccano shop in one of the arcades and the magic came back to me. Without hesitation I bought a number 6 outfit. Bit by bit I converted it into a full Ten Set. I built a few things with it but not that much. I built the walking robot, the big crane in the covers of manuals, but not much more as I was working full time. I used to build also plastic kits of planes and ships. In my childhood I built the models from the manual, but after my retirement I started one day building an imaginative fairground model which was good and worked well. I changed it several times until a huge model came about. I called it The Spider Rider.

*What other interests do you have? I've seen your wonderful drawings.*

About my other hobbies, well! One of them is drawing. In 1967 while at Hatchetts taking money for entrance to the discotheque I spend 6 hours in the evening with plenty of time to do other things so I started doing simple drawings of cartoons and caricatures which I used to give to the waitresses. One day a nice pad of clean good quality paper came to me and I started with a Bic ball pen to do a monster coming out of water and that was great. I did not know that I could do those drawings, so from 1967 until 1978 when Hatchetts closed down I produced nearly 30,000 hours of drawings having a collection of over 600 originals. Most of these drawings are imaginary ideas of monsters, aliens and non-existing animals, however I have also done drawings of wildlife, sailing ships and others.

*How do you connect with fellow Meccanoboy?*

In 2006 browsing the Internet, I found out about Meccano clubs in London and I was very interested so I immediately joined the South East London Meccano Club, West London Meccano Society, Holy Trinity Meccano Club, Runnymede Meccano Guild and finally the North East London Meccano Club. Since then Meccano has influenced and changed my life by having built so many freelance models. I am in connection with many Meccano members and I attend lots of meetings, exhibitions and venues.

*Have you ever travelled far to Meccano Expos?*

I love travelling and been in a few places by plane or by car, I have explored 80% of Britain and having a pilot's licence I have flown and landed in 101 aerodromes, 6 in Europe. I've stopped flying now.

*I saw your models in the Paddington movie. How did that come about?*

I was sent an article from one of my Meccano clubs, of this film company needing a motorcycle or something for a movie. I contacted them and they asked me to send them some photos of my models, so I sent a few photos and later they asked me for the sizes and descriptions. A few days later I was told the producer had chosen my models for the films. It was magical.



James with Ferocity at SELMEC in Eltham



A scene from Paddington with James' model in the background

*What have been your crowning achievements?*

Getting a pilot's licence, getting my models in Paddington and having produced so many models with my hobby, thanks to being a member of these great clubs and having a very nice family. My life has been enriched by Meccano keeping me busy with this great hobby, and the satisfaction that I get when I do a nice model.

*What are your plans for the future? Is SkegEx on the horizon?*

I have been in SkegEx. I have won quite a good number of trophies including the Runnymede Shield and I hope to keep on exhibiting for as long as I am able.

*How do you look back on your life?* My life has been happy, good, successful, no regrets. I love London and all my family live only a few minutes away.

*What's your advice for young people today?*

My advice to young people is that Meccano helps develop your brain, improving and building better models gives you good ideas. It's perhaps the best toy ever invented.

**Thank you Mr Plicio. I tips me hat to you.**



# A few of my favourite things.



We are John & Johnny.  
A father and son team who like Meccano. We're nothing to do with Spin Master who own the brand. Contact us at [MeccanoNews@gmail.com](mailto:MeccanoNews@gmail.com)  
To follow Johnny Meccano

Click on the icons



Now on Twitter



## New Zealand

<http://www.nzmeccano.com>

<http://www.nzfmm.co.nz>

<https://www.facebook.com/MWT-Meccano-Club-1476153515979522/>

## Australia

<http://www.mmci.com.au>

<http://www.sydneymeccanomodellers.org.au>

<http://www.webjournalist.com.au/maylands/index.html>

## South Africa

<https://www.facebook.com/Meccano-Club-of-South-Africa-464753870326296>

## USA and Canada

[https://www.spinmaster.com/brand.php?brand=cat\\_meccano](https://www.spinmaster.com/brand.php?brand=cat_meccano)

<https://www.usmeccano.com>

<http://www.meccano.com>

<http://www.cmamas.ca>

<http://www.bcmeccanomodellers.com/meccano-in-canada.html>

<http://www.meccanoquebec.org/index2ang.html>

## Personal pages

<https://neilsmeccanoandstuff.jimdo.com/neil-s-meccano-models>

<http://www.melright.com/meccanosales/>

<http://www.users.zetnet.co.uk/dms/meccano>

<http://www.dalefield.com/meccano/index.html>

<http://www.meccano.us>

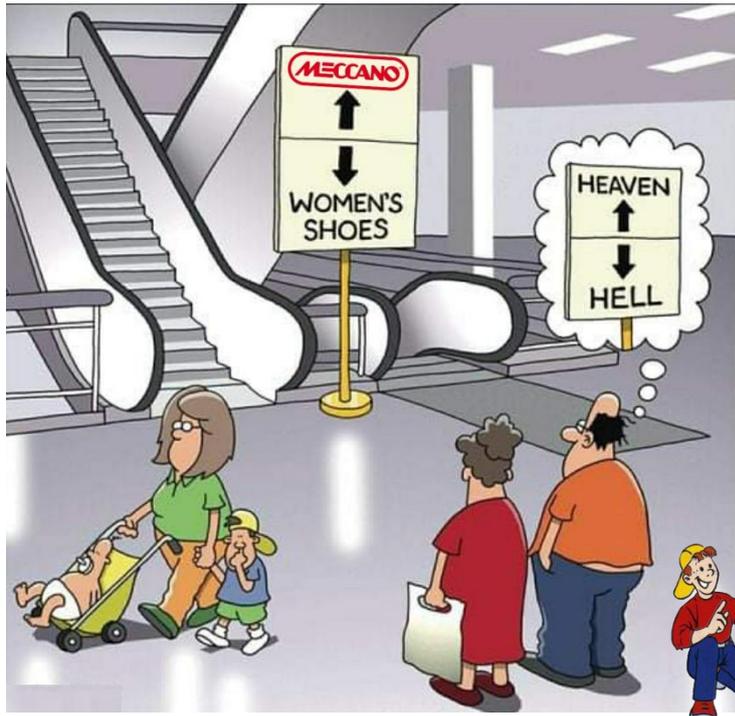
<https://www.meccanoindex.co.uk>

<http://www.meccanokinematics.net>

<https://www.alansmeccano.org>



Click on any of the social media icons and hopefully they will work whether or not you have accounts.



## UK

<http://www.internationalmeccanomen.org.uk>

<https://londonmeccanoclub.org.uk>

<https://tims.org.uk>

<http://hsme.org.uk>

<https://nelmc.org.uk>

<https://runnymedemeccanoguild.org.uk>

<https://www.selmec.org.uk>

<http://www.hsomerville.com/wlms>

<http://www.midlandsmeccanoguild.com>

<https://southwestmeccano.org.uk>

<http://www.northwestmeccano.co.uk>

<https://northeasternmeccano.org.uk>

<https://www.meccanoscotland.org.uk>

<http://www.corlustmeccanoclub.co.uk>

<https://nmmg.org.uk>

## Other Countries

<http://club-amis-meccano.net/>

<http://www.meccaninfos.com.ar/>

<http://www.meccanogilde.nl>

<http://meccano.free-bb.fr/>

<https://www.aceam.org/es/>

<http://www.la-roue-tourne.fr/index.php/le-meccano/notices-et-plans>

<https://www.metallbaukasten-forum.de/>



## Meccano suppliers

<http://www.meccanohobby.co.uk>

<http://meccanoman.co.uk/catalog>

<https://www.meccanospares.com>

<https://ralphsshop.com>

<http://www.hsomerville.com/mwmailorder>

<http://www.metalconstructiontoys.com>

<http://www.meerlu.com.au/>

<https://tinyurl.com/AshokBanerjee>

Meccgear Jeff Clark New Zealand

sales@meccgear.co.nz No website yet but a

pricelist with photos can be downloaded here

<http://www.nzmeccano.com/image-151916>



This magazine is free and always will be but if you feel you get good value you're welcome to buy me a coffee. It may one day help me get off this ancient laptop that runs Windows 7 and Word 2007.

"Doctor, Doctor, I feel like a pack of cards!"  
"I'll deal with you later!"  
Riot Machine MK4

My son was flunking out of college so I told him, "You will marry the girl I choose."

He said, "No."

I told him, "She is Bill Gates' daughter."

He said, "Yes."

I called Bill Gates and said, "I want your daughter to marry my son."

Bill Gates said, "No."

I told Bill Gates, "My son is the CEO of the World Bank."

Bill Gates said, "OK."

I called the president of the World Bank and asked him to make my son the CEO.

He said, "No."

I told him, "My son is Bill Gates' son-in-law."

He said, "OK."

And that's how politics works.

After being married for 50 years, I took a careful look at my wife one day and said, "Fifty years ago we had a cheap house, a junk car, slept on a sofa bed and watched a 10-inch black and white TV, but I got to sleep every night with a hot 23-year-old girl. "Now ... I have a \$750,000 home, a \$45,000 car, a nice big bed and a large screen TV, but I'm sleeping with a 73-year-old woman. It seems to me that you're not holding up your side of things." My wife is a very reasonable woman. She told me to go out and find a hot 23-year-old girl and she would make sure that I would once again be living in a cheap house, driving a junk car, sleeping on a sofa bed and watching a 10-inch black and white TV.