

JOHNNY'S MECCANO MAGAZINE



NebulaZ Part 2

In the last issue of JMM, I showed you how to build the base unit for my NebulaZ. Although it performed flawlessly for 2 days at our Melbourne Expo, I felt the tiny N20 motor was a bit strained, so I beefed it up to use this 50rpm geared motor. These motors have a 4mm shaft and as a result, bosses can be a little loose causing a slight wobble. Richard Payn suggested using a Part 144 Dog Clutch to allow for some slight movement.



Part

No. 5

12

16

18a

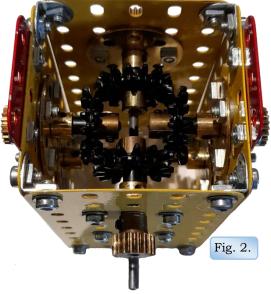
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Please note: This is a cutdown version of my Model Plan. The full 8-page version is available

in hardcopy from Howard Somerville at http://www.hsomerville.com/mwmailorder/ Or email me at MeccanoNews@gmail.com for an electronic version.

This model is designed around the NebulaZ fairground ride by the <u>Zamperla Amusement Group</u>. There are many versions of it scattered around the world but the Viking themed version at Drayton Manor theme park in Tamworth UK appealed the most as it focused on the mesmerising weaving of the arms rather than bright flashing lights. For this reason, I have decided against adding any lighting to my model. This model plan is divided into 3 parts as that's the way I progressed through the challenges. The Tower was my 1st step and took a lot of redesigning before I decided that bevel gears were just too fussy about alignment and would crunch and bind together with the slightest misalignment. The part 27f Multipurpose Gear was perfect for this purpose.



Start by bolting together 4 x part 70 Flat Plates as close together as possible without overlapping. This will ensure the top half of the tower is thinner than the bottom half, thus, allowing the top to slot inside the bottom later. It will be easier to bolt the part 24 Bush Wheels in first, as I discovered. Make sure to use Washers as spacers to allow for the peened boss. Before tightening the Bush Wheels, put a long Rod through the holes to keep things lined up. After tightening, make sure the Rod turns freely. Put a 1.5" Rod in each of the top Bush Wheels and secure the 19t Pinions, 27f Multipurpose Gears and the 38a large plastic Spacers. In Fig. 1, left, there's an illusion of a Rod between the Multipurpose Gears. That's one of the fixed Rods in the lower Bush Wheels.

Add the part 74 Flat Plates using a long Rod to make sure the centre holes are aligned as the 57t Gear Wheel is journalled through these and it needs to be perfectly horizontal. Since the Model Plan was published, I've slightly altered the gearbox for better stability.

1. Added a Collar between the Multipurpose Gears. Fig 3.

2. Moved the Bush Wheels inwards with 3 x Washers and removed the small plastic Spacers. Fig. 3.

3. Journalled the Rods through 2 x QI Narrow Strips on the outside of each face. Fig. 4.

Page 2

27a	Gear Wheel 57t	
27f	Multipurpose Gear	
38a	Plastic Spacer Large	
53a	Flat Plate 4½" x 2½"	
59	Collar	
59c	Soft plastic Collar	
63	Coupling	
74	Flat Plate 1½" x 1½"	
187a	Conical Disc	
114	Hinge	
192	Flexible Plate 5½" x 2½"	
C369	Trapezoidal Plate	
9000		
(70)	0000	

Description

Strip 21/2"

Strip 5½"

Angle Bracket

Rod 31/2"

Rod 11/2"

Bush Wheel 8 hole

Pinion 19t

Qtv

8

20

6

4

10

5

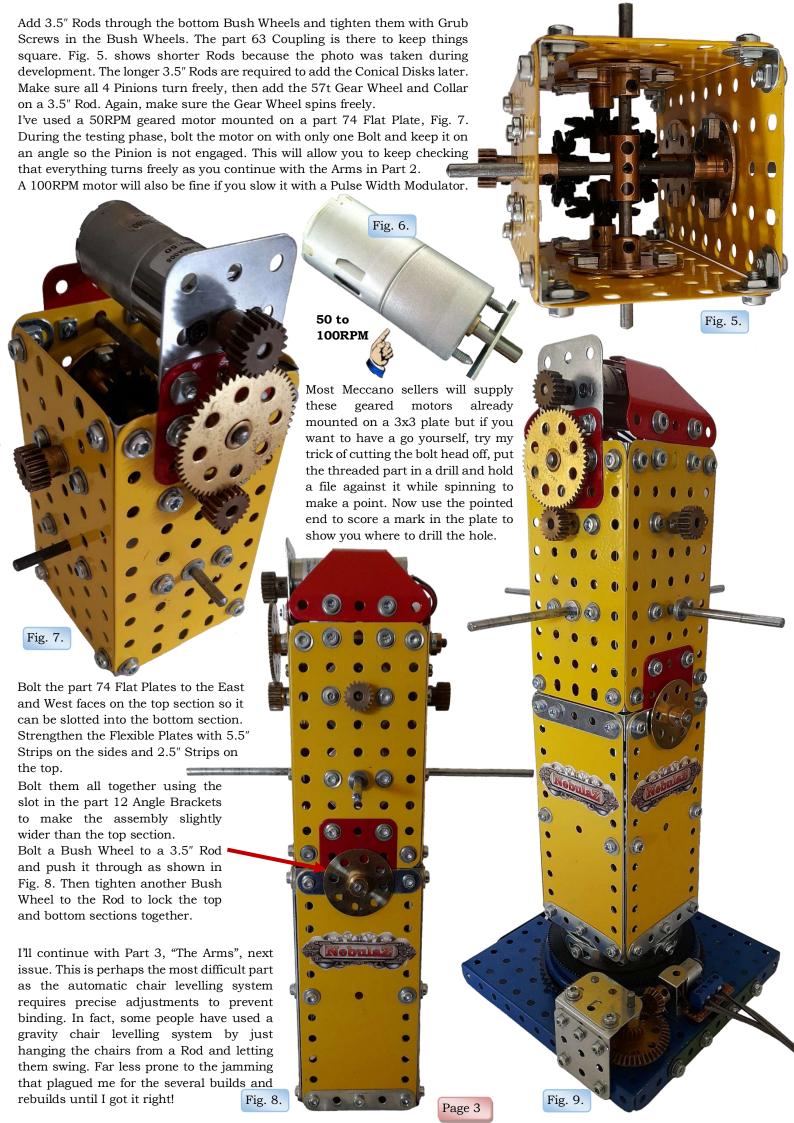
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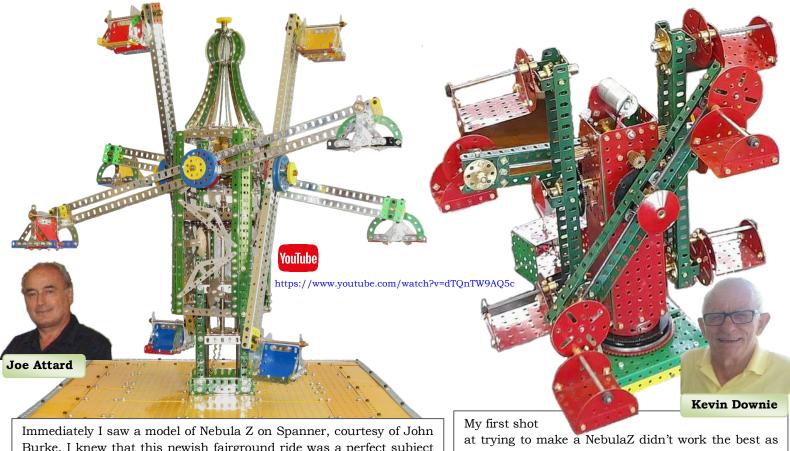
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1







Immediately I saw a model of Nebula Z on Spanner, courtesy of John Burke, I knew that this newish fairground ride was a perfect subject for Meccano. So, within two months I had one up and running. To me, the main challenge was in raising and lowering the upper structure. After much trial and error this was satisfactorily achieved, albeit in a larger model than John's. Watch the video to see how. Who knows whether this raising and lowering movement can be achieved in a smaller model? – Joe.

I built my model after seeing some models on 'Meccano Nuts' and before I received the instructions. I have used 9.5" girders for the arms two N20 motors for the drive motors (each mounted in my own 3D printed cases). I also had to 3D-print my home-made commutator which was then covered in Baco Foil using super glue. I have used 4 bevels mounted in a five-hole coupling for the main drive distribution with no problems. I fastened long threaded pins to the face plates for the side mounted seats, each containing two Lego people (some I had to 'borrow' from my grandchildren). I use two DPDT centre Off switches and two PWM modules for the speed and rotation direction.

at trying to make a NebulaZ didn't work the best as the bevel gears kept jamming. I've since found out it is better to use multi gears I am going to do away with the N20 motor and use a geared motor. Not sure of the RPM. Also need to fix chairs: they are too big. I need to get all the gearing sorted which will be the hard part to do so it looks like a total re-build. I hope to have it working for our Ashburton show next year. – Kevin.

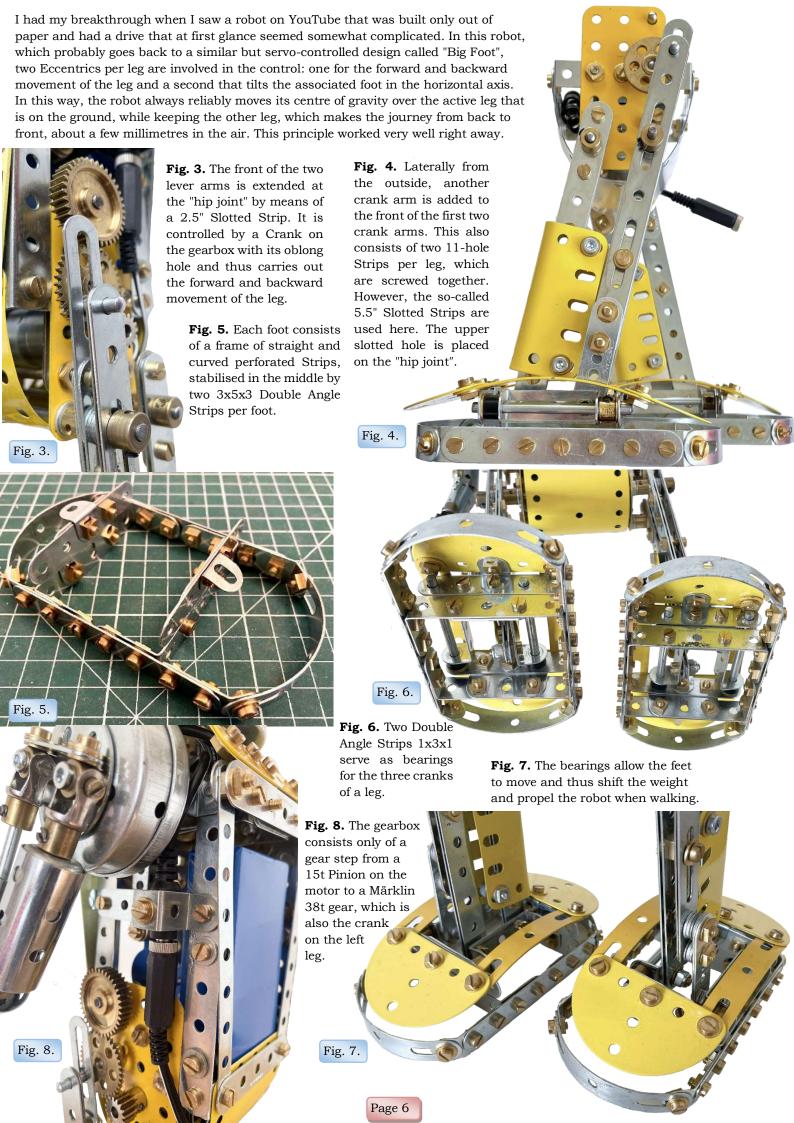
When I saw @JohnnyMeccano's Instagram post of the NebulaZ in its early stages I had to build my own using some different methods. To drive the base, I've used a stronger geared motor and added the Braced Girders for a nice decorative effect. My tower has triangular Flexible Plates to give it a more enclosed look and the motor for the arms is enclosed inside the tower. It's totally a challenging model to build, but I loved it!

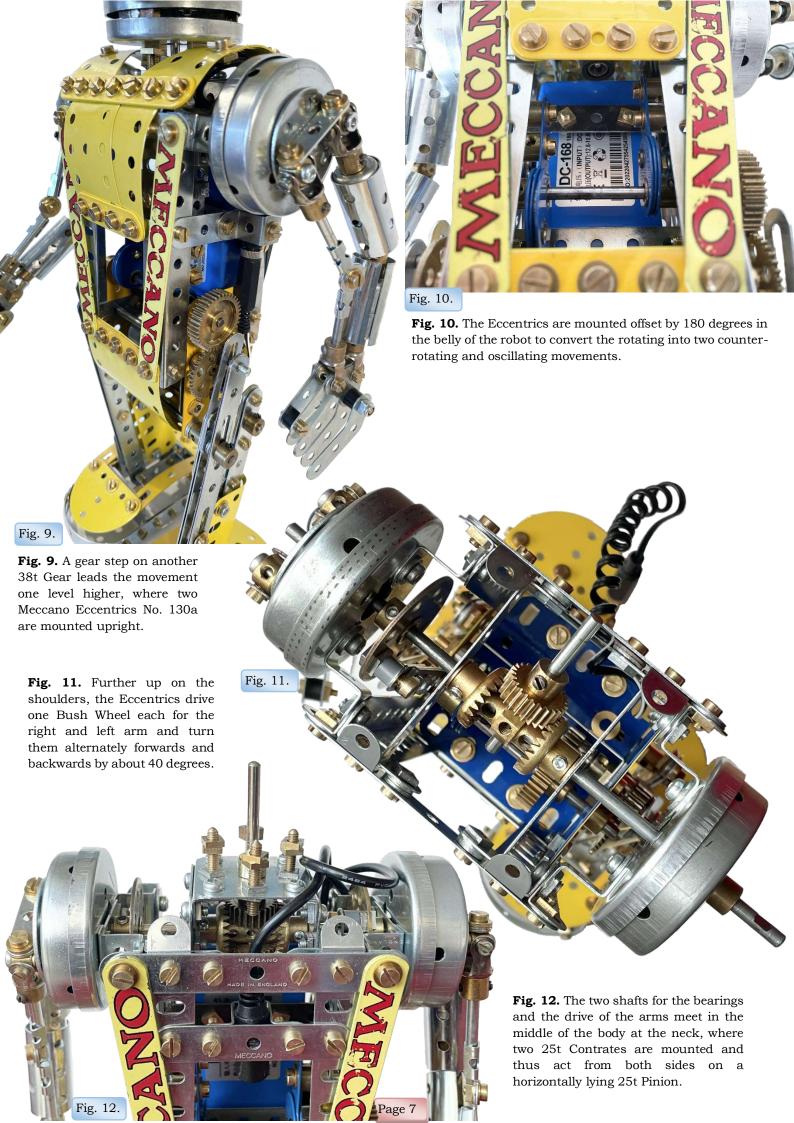
It's totally a challenging model to build, but I loved it!

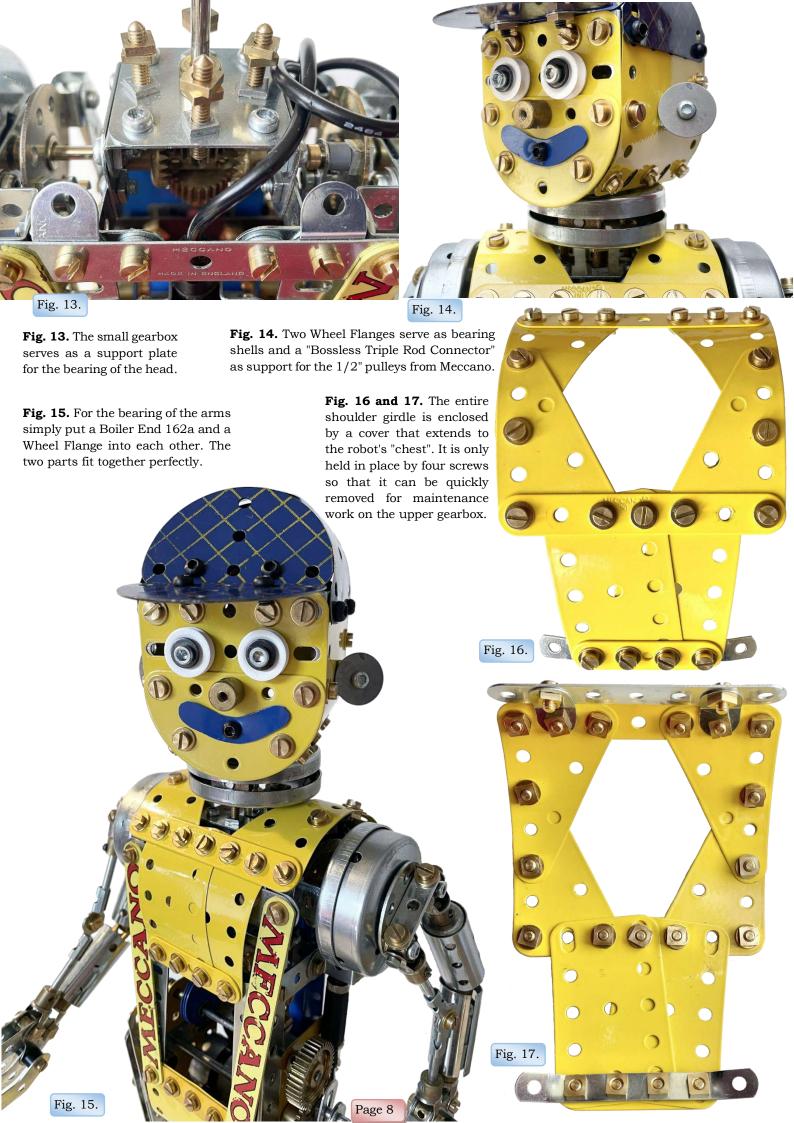
https://www.instagram.com/meccanofan/















Nickel plate Pea-green Dark green 6028 Medium green (pre-war) Gold Matt olive 6003 (army) Medium green (post-war) Light green 6001 Silver paint 9006 Zinc plate Yellow 1037 5003 Dark blue Early red 3004 Dark red Medium red 3003 (pre-war) Blue/gold Medium red 3003 (post-war) 3001 Light red



With the advances in computer technology these days, you don't need RAL codes, Pantone codes or anything else to get a colour match. Even in my small town, I simply take a bit of Meccano into the paint store, the guy grabs a litre of base paint (I use water-based enamel) and puts it under the machine. He then puts my Meccano in front of the scanner

and the machine does it all. Paul Dale has an RAL colour fan, so he got together with Simon Coultas and did some colour matching. This is by no means a complete guide to the myriad of Meccano colours and their variations. Rather, it's a quick guide to colour matching the 4 primary colours, Green, Red, Yellow and Blue with 3 shades of each, Light, Medium and Dark. If you rock up to your local paint store and tell them you want some water based enamel in RAL 6028 the paint guy will most likely roll his eyes and say "Give me the bit of Meccano" and put it under the scanner.

Colours

Light Green

RAL 6001

Provenance: 1960s

Notes: This matches the darker of the many shades of light green. RAL 6017 is a poor match for the lighter shades. Lots of variation was evident even in parts from mint unused

sealed dealer boxes.

Medium Green

RAL 6002

Provenance: 1950s

Notes: Parts sampled were good condition but used. Paint colours likely varied quite a bit over the period.

Dark Green

RAL 6028

Provenance: 1928 - 1934

Notes: The parts used for matching were over ninety years old and had been used.

Light Red

RAL 3001

Provenance: 1960s

Notes: Some colour variation was evident with parts from mint sealed dealer boxes.

Medium Red

RAL 3003

Provenance: 1950s

Notes: Parts sampled were good condition but used. Paint colours likely varied quite a bit over the period.

Dark Red

RAL 3004

Notes: The parts used for matching were over ninety years old and had

been used.

Provenance: 1928 - 1934

Light Blue

RAL 5005

Provenance: 80s 90s

French

Notes: Powder coated finish. Thicker than Binns Rd medium blue.

Medium Blue

RAL 5010

Provenance: 1970s UK Notes: Thinner paint coverage than the light blue.

Dark Blue

RAL 5003

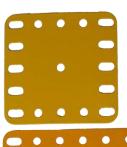
Provenance: 1978

Notes: This is a good match for the earlier glossy version, not the later matt paint.









Army green 6003

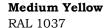
Dark yellow 1017

Royal blue 5010

Light Yellow

RAL 1018

Provenance: 80s/90s French Notes: There are two distinct shades of this colour, both are close to RAL 1018.



Provenance: 1970s UK

Notes: This shade was variable and very prone to lightening when exposed to light. Caveat Emptor.

Dark Yellow

RAL 1017

Provenance: 1978

Notes: Plastic plates of this era appear as a quite different colour which is close to RAL 1032.

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FROM OUR GOOD IDEAS DEPARTMENT From Pierre Chevaleyre. Shove these cube shaped rare earth magnets into a plastic wall plug and then squeeze it into an old clock key. From Richard Payn - This built up double UJ has started to twist a bit. Solution: Add an early half inch pulley secured either side of the narrow strips. Hold in place with a pivot bolt through the plain hole of the collar. The narrow strips are attached to the collar with long grub screws and a flat nut. An Elektrikit washer is placed under one of the narrow strips.



Of course, if one doesn't have the early Pulley just slightly oversized Meccano Washers would work too.

Rob Clark from the UK discovered that a standard DPDT switch fits perfectly inside a part 45 Double Bent Strip.

I measured my switch at 11.4mm on the narrow side and it is indeed a perfect fit!



This Month's Meccanoboy Edmundo Veiga - Brazil

When and where were you born?

I was born in Rio de Janeiro, November 28th, 1944. I was the 5th child of 7. My parents lived long. My father died at 102 in 2007 and my mother at 96 in 2010. *Where did you go to school?*

I attended secondary school at a private Catholic Jesuit School, Saint Ignatius, in Rio. I took my senior year in High School in an American public school in Bloomfield Hills, a suburb of Detroit, Michigan. I was hosted during that year of 1961, in an American family, through a foreign exchange student program called American Field Service. This year I will visit the family to attend our 60-year High

School graduation reunion.

Did you go to university?

Yes. I obtained my civil engineering undergraduate degree attending the public Federal University of Brazil in Rio.

Did you have Meccano as a child?

I received my first Meccano set at the age of 6.

Are you married? Any kids?

I married Nina in 1968 and had 2 boys (1969, 1971) and a girl (1981).

This year we commemorated our 54th year anniversary of marriage.



There are no Meccano clubs in Rio, nor in Brazil that I've heard of. I enrolled in several clubs abroad, for the purpose of receiving their club magazines publications. I was a member of the ISM. I'm a member of CAM and Runnymede Meccano clubs. I have been member of clubs in South Africa, Australia, and New Zealand. As their correspondence arrives here quite late, I am not a member of these clubs anymore, due to absence of alert notes to renew my membership on the appropriate time.

Geodesic

spherical

dome.

My largest model so far.





Did any of your kids share your interest in Meccano? Although one son graduated in college as an architect, the other as electrical engineer, and my daughter as production engineer, none of them developed interest in Meccano. They say that, when kids, I did not let them play with my precious Meccano parts, expressing fear that they would lose or break them. What was your first job? What did you do for a living? During college I worked as a trainee on a public company, which produced and paved with asphalt, streets in the city. Once graduated I started working in my father's construction company which custom built houses and buildings by demand. I still work there in partial time. My son Architect is running the company today. Along my 56 years in the construction company, I have built hotels, apartment buildings, fantastic private homes, remodeling works from small to large sizes. In recent years I have been overlooking the construction of 2 fancy houses in Nassau, Bahamas, done by local contractors for a client of mine here.

A view of the largest house we ever built. This one has around 55,000 sq ft of covered area on a lot of 275,000 sq ft on the seafront. It has an unusual (here), laminated wooden frame. It is basically a single floor house having 2 huge suites on a partial second floor. It was built as a summer place for a rich banker.

What was your best model? I have built several models from plans. Some of them, like the Ferris wheel (destroyed in the fire), I built from pictures captured on the web. The largest so far is a 7' high Eiffel tower which I built from a VirtualMec drawing, obtained in the web. I built the Giant Block Setting Crane from SM4 plans (destroyed in the fire). As I like geometry, I built several skeletons of geometric semi-regular solids with Meccano parts. Using VirtualMec and a 3D drawing software, SketchUp, I was able to measure real angles and dimensions of edges, which enabled me to build several of those geometric solids. The most complex one I built was a geodesic spherical dome, using

solely standard sized rods and properly bent rod connectors.

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I heard you had a fire, and all your Meccano was destroyed.

I had a fire in my attic in 2007 which destroyed all my Meccano possessions gathered along the previous 35 years. Those Meccano items were carefully picked up on my trips abroad and brought home in my luggage, except for a #10 set, bought in Harrods in 1971 and brought home by surface mail. Since the late 90s, I got acquainted with the Meccano community through the web and became a frequent remote Meccano accumulator by mail. This fire also destroyed my home shop, full of tools difficult to get locally, gathered along a lifetime. It also destroyed my pool table and all my hard-to-get-locally ammo reloading equipment that enabled me to reload some 20 different calibres. In Brazil, where everything is government controlled, and hard to get, this was a loss of a treasure. I also lost all my books of a lifetime.

What's life in Rio like? Are there any other Meccano people there? Life in Rio, as well as in Brazil, is very agreeable. We have a mild warm climate, all year long. In Rio we live in the vicinity of the ocean. In Brazil it does not snow. We are not hit by earthquakes, tsunamis, hurricanes, or tornadoes. Although Brazil is very large, we do not have volcanoes nor deserts. We have no external enemies. The only war Brazil took part on its territory occurred in 1864. We did send troops to fight in Europe in the second WW. The worst natural disasters we face are fruit of periodical heavy rains that provoke floods and/or landslides. People here, in general, are warm, friendly, and cooperative. Our main weakness is impunity, which encourages transgressors to commit crimes. Even so, in extensive areas of Rio (population of 6.3 million), one can live without exposure to crime. My original family and most of my school mates still live in Rio.

Have you been to Mt Corcovado to see that massive statue of Jesus? The statue of Christ, at the top of Corcovado Hill, became one of the icons that identify Rio. I lived, until reaching 24 years of age, in a house at the foot of that mountain. I could go there in some 20 minutes by car. Even so, we only visited there when we had visitors to take sight-seeing. As the city is surrounded by several hills, the view from there is superb (710 m high), overlooking the bay as well as the city all around it at the sea level.

What was it like when the Olympic games were in Rio?

The Olympic games brought visibility to Rio. It attracted a lot of tourists, which passed partially unnoticed due to Rio's large population. Their presence was more noticeable in tourist areas or around the Games' arenas. I do not care much for sports, so I only attended 2 secondary competitions, just for statistics' reasons. It was a frenzy of crazy dispensable public expenditures, an opportunity to practice large kickbacks, corruption and graft. In a country with lots of poverty, such initiatives represented unjustifiable dissipation of scarce means. Now we are left with a collection of huge empty buildings, white elephants that stay as monuments to the irresponsibility of our public leaders.

Giant Block Setting Crane. santa >> The remains of my house. Page 14

Remains of my

Have you travelled much?

I like to travel abroad. I have visited the USA and France multiple times. I have also visited Portugal, Spain, England, Scotland, Switzerland, Germany, Czech Republic, Austria, Hungary, Italy, Greece, Turkey, India, Thailand, Nepal, Hong Kong, Tahiti, Argentina, Mexico, Bahamas, Canada, and Russia. Whenever possible I try to contact Meccanomen during those trips. The Spanner list has helped me to know about them. I have met them personally in the US, Argentina, Spain, France, Thailand, England, and Scotland. I am always well treated by them, due to our common core of interest in Meccano, which makes one feel like knowing each other for many years.

Being a member of Spanner since the late 90s, this connection made it possible to have the pleasure to receive in my home in Rio, Meccanomen from England, Italy, USA, Argentina, and Brazil. Although Brazil has also some Meccanomen I only found them by identifying their virtual presence on Meccano sites abroad. I have developed good relationship with a couple of them, met by this indirect method.

presence on Meccano sites abroad. I have develope with a couple of them, met by this indirect method.

L. P. Wife Nine Can Educada Edward a visiting

L-R Wife Nina, Son Eduardo, Edmundo visiting Colin Smith at Phoenix, Arizona airport in March 2015.

What other interests do you have?

I have always been very curious. I try to acquire knowledge on subjects that attract my attention. I like to draw 3D geometric items on computer, draw with VirtualMec and build Meccano contraptions. I like to practice target shooting, learn new tricks by studying electronics and the use of Arduino as a controller for preprogrammed robotic actions. I like to do small metal or wood jobs in my rebuilt home shop, using my lathe, milling machine, and a multitude of tools. Recently I acquired a cheap 3D printer which represents a whole new horizon of possible realizations. I collect firearms, paper weights, mechanical puzzles, knives, canes. As you probably noticed by now, my wife is a saint creature, which allows me to practice so many unrelated activities at home.

You're very good at VirtualMec. How long have you been doing that?

I love drawing Meccano assemblies with VirtualMec. I acquired its free version as soon as I learned about its existence. Later, I bought their unlimited version, which nowadays became free for anyone interested. I do not recall when it all began, but I guess it has been some 20 years. There are several features of VirtualMec that I never learned how to use, (for instance: associating movement or rotation to gears, proportional to their sizes). Bob Thompson is by far the best person I know to help me master VirtualMec.

What sort of computer do you have?

I use a generic desk top computer with an Intel i5 processor, equipped with a GeForce Multimedia 3D Graphic Accelerator, to enhance its performance dealing with my 3D drafting software. Recently I am taking remote lessons to learn to use the 3D drafting software from AutoCAD, Fusion 360, which is much more complete to draw mechanical objects than SketchUp that I am more acquainted with.

What's retirement like?

I am not completely retired but I am in the process of fading out, leaving to my son the joys and burden to follow on with our company. In Brazil the social security tax anyone with formal work, but it does not provide revenue compatible with what it absorbs. I am retired there after 35 years of contribution and obtain from it today a pension equivalent to U\$700, declining as I insist on being alive. In Brazil only the public workers get a retirement pension equivalent to their salaries before retiring. This is possible as long as the private sector can cover the bill, by being overtaxed and guaranteeing to the government employees and politicians all kind of privileges. In order to survive, people of private sector in Brazil, practically do not retire, and have to accumulate assets during their active years to be source of revenue in old age. At the same time, politicians spend a good part of their legislature activity planning to implement new rules to allow them to take away more money from assets of those who saved,



Do you have any advice for kids today?

My message to kids is to encourage them to acquire as much knowledge and abilities since they represent the only wealth one can carry with himself wherever they can be taken to. Everything else of material value one can save is not secure from being unjustly taken away.

The other message would be to encourage them to enjoy life and its pleasures on a daily basis, since we do not know how far The End is. Mix work and obligation with leisure and entertainment. A life sentence in prison with every other day off for leisure and entertainment would be like having your sentence reduced by half. 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







https://tims.org.uk https://nelmc.org.uk https://nmmg.org.uk

https://www.selmec.org.uk

https://southwestmeccano.org.uk https://londonmeccanoclub.org.uk http://www.hsomerville.com/wlms

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https://www.meccanoscotland.org.uk http://www.corlustmeccanoclub.co.uk https://runnymedemeccanoguild.org.uk

http://www.midlandsmeccanoguild.com

Other Countries

http://club-amis-meccano.org/ http://www.meccaninfos.com.ar/ http://www.meccanogilde.nl

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

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https://www.spinmaster.com/brand.php?brand=cat meccano

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New Zealand

http://www.nzmeccano.com

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Australia

http://www.mmci.com.au

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

South Africa

https://www.facebook.com/Meccano-Club-of-South-Africa-464753870326296 http://www.mecworld.co.za/cmrp/

Meccgear Jeff Clark New Zealand

Mike Rhoades. Link to price list below.

Personal pages

https://neilsmeccanoandstuff.jimdofree.com/neil-s-meccano-models

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

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https://meccanocreations.in

http://www.meccano.us

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Meccano suppliers

http://www.meccanohobby.co.uk https://www.meccanoshop.co.uk http://meccanoman.co.uk/catalog

https://www.meccanospares.com

https://ralphsshop.com

http://www.meerlu.com.au/ https://tinyurl.com/AshokBanerjee

http://www.hsomerville.com/mwmailorder http://www.metalconstructiontoys.com

Dear John, I hope you can help me. The other day I went shopping, leaving my husband in the lounge trying to fix his 6 speed Meccano motor. When I got home, I could not believe my eyes. He was in our bedroom with the woman from next door.

I am 54, my husband is 64 and the neighbour is 39. We have been married for 30 years. When I confronted him, he broke down and admitted they had been having an affair for six months and I'm afraid I'm at my wit's end. Can you please help me? - Sincerely, Sheila.

Dear Sheila, The Meccano 6 speed motor is often referred to as a PDU and is renowned for stripping the tiny white plastic nylon gears. This usually happens due to excessive load being placed on the motor. I would suggest using a pulley and pulley belt to act as a clutch if gears jam further down the line. It's much better to have a pulley belt drive slip than damage such a beautiful motor. I hope this helps. - Sincerely John.

A woman brought a very limp duck to a veterinary surgeon. As she laid her pet on the table, the vet pulled out his stethoscope and listened to the bird's chest. After a moment or two, the vet shook his head and sadly said, "I'm sorry, Ma'am, but your duck, Cuddles, has passed away." The distressed woman wailed, "Are you sure?"

"Yes, I am sure. Your duck is dead," replied the vet.

"How can you be so sure?" she protested. "I mean, you haven't done any testing on him or anything. He might just be in a coma or something."

The vet rolled his eyes, turned around and left the room. He returned a few minutes later with a black Labrador retriever. As the duck's owner looked on in amazement, the dog stood on his hind legs, put his front paws on the examination table and sniffed the duck from top to bottom.

> He then looked up at the vet with sad eyes and shook his head. The vet patted the dog on the head and took it out of the room. A few minutes later he returned with a cat. The cat jumped on the table and also delicately sniffed the bird from head to foot. The cat sat back on its haunches, shook its head, meowed softly, and strolled out of the room. The vet looked at the woman and said, "I'm sorry, but as I said, this is most definitely, 100 percent certifiably, a dead duck."

> The vet turned to his computer terminal, hit a few keys, and produced a bill, which he handed to the woman.

> The duck's owner, still in shock, took the bill. "\$550!" she cried, "Just to tell me my duck is dead?!"

> The vet shrugged, "I'm sorry. If you had just taken my word for it, the bill would have been \$50, but with the Lab Report and the Cat Scan, it's \$550.

