

Journal No. 126, June 2016

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Secretary/Treasurer: John Ozyer-Key

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Contents

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The SMG Journal needs your support!

We welcome your reviews, news, reports, comments, building instructions, model descriptions, views, sales & wants, pictures (film or digital) or anything regarding SMG activities and Meccano in general; you will receive as much or as little support as you require. Submissions are welcomed as e-mail, scan, CD, memory stick (returned), Internet link, typed or by any other recognised form of human communication, even prehistoric pen & paper through the post. 'Meccano' is acknowledged by The Sheffield Meccano Guild as a registered trademark.

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Editorial 126

We have a distinct French theme in this edition thanks to the association with our Meccano friends over the Channel. Our last edition went down very well with the recipients in CAM's 'top brass', many from the SMG supported CAM at their annual country-roving Meccano exposition which was at Calais this year and CAM's finest even saved your Ed's pictorial bacon with a good photo of a special model at Calais. *Entente cordiale* is certainly thriving in Meccanoland and long may it continue.

It will be a shock to many to learn that Michael Denny has died; a tribute can be found on page 31. Michael was one of Meccanoland's best-known characters and was particularly keen on offbeat, entertaining, hands-on subjects so it is a great pity that he won't see Bob Seaton's model on pages 32 & 33; Michael would have liked it very much and would be one of the first to give it a good thrashing. As picture quality steadily improves, the opportunity has been taken to feature Bob's innovative work at a grand scale on the centrefold and it must surely spawn a few rebuilds.

Once again, your Editor was faced with the increasing problem of what could be held over to future editions rather than having to fill space. Luckily, those not having their work featured this time weren't too perturbed and were assured that the longest waiting list affects my own material. Some things are fairly non-perishable, others are more time-sensitive; hopefully a balance can be struck and no-one has yet complained! Additionally, every item has been through several drafts to reclaim space here & there and have them end at a reasonable place. Much time, effort and checking goes into your *SMGJ* at every step of the production process as our contributors - lots of them! - would testify. *Rob Mitchell*

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On the cover

In SMGJ124 (October 2015), Bill Charleson provided building instructions for his crawler tractor featuring the twodifferential, twin-motor Gleasman steering which is one of the best all-mechanical arrangements. Russ Carr couldn't wait to build his own then treated it to joystick control via 'Arduino'. Alan Lovett also liked the look of Bill's model and it convinced him to join the SMG! Alan's version is on the left, Russ's on the right and they make a curious comparison as except for the most elementary of models, nobody builds a model exactly as prescribed. They were pictured by your Ed at Laughton-en-le-Morthen on 16th April where Alan and Russ conveniently occupied adjacent spots.

Laughton Laughs, Fun and Games SMG at Laughton-en-le-Morthen Village Hall, 16th April 2016 Recounted by Albert Howe, Margaret & Raymond Massingham, Lesley Mitchell and Tony Seed Pictures by Hellmuth Kohler and Rob Mitchell

Undermine the willingness of some to travel to a Meccano meeting. On top of events organised by our fellow clubs for the same day, a smattering of the white stuff appeared at first to be denting numbers but, after the fairly slow start, Laughton Village Hall steadily filled then buzzed. A space promptly and mercifully occupied was the kitchen where our hero and professional chef **David Miller** could be found. If it was his intent to make himself popular at the outset then David succeeded spectacularly with bacon butties until a vital ingredient (the bacon) ran out. There was a

warming soup too with bespoke savouries - the quality spoke for itself - that all present happily shoved in their bulging hamsterlike chops. If this first effort was to find his Laughton feet then David's October menu should guarantee a full house before the Meccano is considered!

Four reporters gradually emerged from a clutch of invites; **Albert Howe** (according to his two pals, it's about time the SMG had some work out of him), **Raymond & Margaret Massingham, Tony Seed** and **Lesley Mitchell** temporarily abandoned the LMS trading empire. The table layout was divided into roughly equal areas and first to send their finished literary exploits were Raymond & Margaret with whom we will start... Les Nightingale Jnr's first model was an elegant and compact ball roller in yellow and zinc, which worked very smoothly and almost silently. The ball-raising mechanism was a built-up spiral using long Bolts and curved Narrow Strips. His next model was of a railway four-plank open wagon based on standard British rolling stock and built from Modelplan 109B. I was interested to see this model as it has been on my 'to do' list for a while. Next along the line was **Anne Nightingale** who operated her famous spiral guilloche directline Meccanograph, surrounded by many examples of its colourful and intricate patterns.



Mike Fallows also had a Meccanograph producing large, extremely detailed patterns in a variety of colours. Mike also presented a version of a dealer's display board of various drives and mechanisms, copied from pictures found on the Internet and using 384 Meccano parts including Bolts, Nuts & Washers. It was operated by a timed pushbutton and geared 12V motor. I particularly liked the sounds made by the various cams!

Next along were our own models. **Margaret** had a No. 10 4-6-0 locomotive & tender in red & green based on Tony Parmee's Modelplan 114. The centre driving wheels used additional 6" Circular Plates which took it out of the No. 10 remit; Tony's version omitted these. Setting



↑ Mike Fallows
 presented this series
 of mechanisms. (RM)

 ← Modelplan BR
 open wagon built by
 Les Nightingale
 Jnr. The Narrow
 Strip 'stripe' denotes
 the end with a door,
 here quite firmly
 fixed! (RM)

the Walschaerts valve gear was tricky but it was satisfying to see it in operation. The model was controlled using a push switch built from Elektrikit parts. **Raymond** had another Tony Parmee No. 10 model in red & green, the railway service crane from Modelplan 211. Unlike the original No. 10 version, it had an excellent braking system which engages as the drives are disengaged so there's no danger of jib collapse! The drive to the slewing mechanism was very tight and, even with part selection, Raymond found he needed to space the yoke plates further apart, and also add bracing to the 16t Bevel support plate.

 → From Modelplan 114 is this vaguely LMS-looking 4-6-0 tender loco as built here by Margaret Massingham. (RM)
 ❑ Raymond Massingham also failed to resist a No. 10 Modelplan and opted for 211, the railway service crane. (RM)

We move on to **Philip Webb** with a roller bearing which was under construction. It was designed to have a relatively narrow diameter with a large central area for access and with a hook design to engage the upper and lower sections. We hope to see this in a tower crane sometime soon. Philip also presented a pair of very elegant and detailed Harley-Davidsons; you could almost smell the burning oil. In addition there was a VW microbus built with Philip's usual skill and flair that was very evocative of time spent travelling around Europe in the 1970s.

Russ Carr had a crawler tractor

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driven by two Monoperm Motors and controlled using a custom-built unit based on Arduino and PS2 joystick parts. Initially designed by Bill Charleson and featured in SMGJ124, it was a joy to behold. Russ passed off the control system from a modified computer power supply with characteristic modesty; an altogether excellent system.

Alan Lovett also showed a chunky crawler tractor from the same source and it was Bill's work that convinced him to join the SMG! His main model





was of a Series 1 Land Rover to his own design which included a four-speed & reverse gearbox, selectable four-wheel drive and high-low ratios; it also had prototypical suspension arrangements. In addition there was a version of the *MM* 'Spanner' horse & chariot from a Konkoly design. This used an MR Motor and a redesigned chariot to make it better balanced than the original. Finally, he had a simple beginner model and a forklift truck.

Jim Gamble had a modified version of the No. 9 Walking Robot which looked smart in red & green.

Laughton in colour 1: some models

- 1. While builders continue to grapple with a well-known and increasingly notorious tower crane, **Philip Webb** shows what a proper, enthusiast-designed main bearing should look like. (RM)
- 2. Philip sent himself back to the 1970s by building this VW chartreuse microbus. (RM)
- 3. Les Nightingale Jnr built this Derrick Murdie-designed minimalist ball roller. (RM)
- 4. The Konkoly horse & chariot reworked, remotored and improved by Alan Lovett. (RM)
- **5.** This cheery chap of 1958 to 1972 vintage was presented by **Jim Gamble**. (HK)



Laughton in colour 2: more models and all in red & green to boot

- 6. We'll make a start with Roy Smith's little No. 4.5 Outfit Magic-driven sewing machine. (RM)
- **7.** Among **Mick Burgess's** large collection of small models were these two: a 1960s No. 4.15 Sports Car and from the April 1948 *MM*, a Saloon Car. (RM)
- 8. **Rob Mitchell** came over all nautical to tackle a blue & gold era Tug Boat in medium red & green. The mast guy ropes had become a little droopy during transit... (RM)
- **9.** Thanks to our pals in TIMS having a Land Rover theme at their popular Meccanuity show, there was a knock-on effect at Laughton as one of **Mick Burgess's** other models testified. The Land Rover's trailer had a Magic stashed underneath to make it a two-motor assembly. (RM)
- **10. John Sinton's** model captures the utilitarian character of the WD 2-8-0 freight loco. (RM)

Finally, we come to Rob Mitchell whose first model was a prewar No. 7.18 Tug Boat in red & green and built for the March 2016 NEMS theme. I built this in my youth and always thought it to be a very satisfying model. Next was a demonstration set-up mixing ideas of simple harmonic motion and static & dynamic friction and as an ex A-Level physics teacher I would have liked to have seen this working. [Ed. 230V didn't make it to that area so it was stationary!] Rob's main model was a most impressive version of Modelplan 32, Servetti's Magician. This incorporated several improvements and is still a 'work in progress' and the changes may appear in a future SMGJ. Fingers crossed, I would really like to attempt this. We finish our stint with Rob's version of a Plutolabe built from a gearing diagram in the November 2015 Newsmag.

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Raymond & Margaret Massingham

Thank you Raymond & Margaret and now to Lesley's look.

We begin my model guide to Laughton with **Mick & Frances Burgess** who had travelled especially from Kettering on the day, attempting to rival LMS. However, Mick was outclassed as I had more rusty bent Strips... Firstly, Mick presented his 1932 No. 2.37 Stamping Mill in vintage red, green & blue, the hammers moved by a simple cam action.

He also had a light red & green No. 4.15 Sports Car from the 1962-1969 Manuals and the April 1948 *MM* Saloon Car. Finally and taken from the June 1955 *MM*, Mick showed off his Land Rover and Trailer which continued the red & green colour theme. Mick used early red 2" Pulleys to match plus it had working steering and was powered by a No. 1 Clockwork Motor in the 'Landy', assisted by a Magic Motor under the trailer!

Next was the West Yorkshire duo, the first half being **Paul Robertshaw**. Paul displayed four red & green models of which his Double-Deck Bus was from a No. 7 Set. It featured lights to the stairs and seats and had four-wheel drive. The Furniture Van was complete with a load of miniature furniture and was quite cute; I rather liked this model, Paul! Others included an AEC Single-Deck Bus and a No. 3 Outfit Car.

The second of our West Yorks duo was Bradford's own **John 'Nickel' Bader**. John had a selection of predominantly No.1 Outfit models from the

✔ A captive 5¹/2" Angle Girder on contra-rotating discs is an exercise in weight distribution and static & dynamic friction by Rob Mitchell. (RM)
 ✔ Paul Robertshaw has made a good job of this appealing little No. 3 Outfit Car. (RM)





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1960s Manuals, the majority being built in... you guessed it... nickel with blue cross-hatched Plates in my favourite 1930s colour scheme. John says he made a few enhancements to put his own stamp on the simpler models. At least you remained awake John, unlike when I caught you napping at Bedale. Oh, have I said something wrong again? Moving swiftly on...

Laughton in colour 3: a collage of countenances

Set against a background of Mick's enticing sales stock and starting clockwise from the upper left we have **David Miller (Wendy** is behind); **Jim Gamble** with **Frances Burgess; Philip Webb** with **Mike Fallows** beyond; **Roger Burton** with **Wendy; Tree & Frank Singleton** with **Tim Martin; Lesley Mitchell, Robin Johnson** with **Jim; Russ Carr** with **Ken Ashton.** (HK)

← Rob Mitchell built this Plutolabe from the gearing layout featured in the NMMG *Newsmag* for November 2015. At the rear is a fan-governed No. 2 Clockwork Motor and at the front is a Face Plate handwheel. (RM)
◆ No. 7 Outfit Bus by **Paul Robertshaw**; parts for its four-wheel drive were not included in a No. 7! (RM)
ピ Tim Martin's 'Slinky' exerciser used planetary gearing to ensure the two Flanged Plates remained parallel while they oscillated. (RM)





Tim Martin graced us with a colourful motorised kaleidoscope. Other models of Tim's included his 'Slinky Juggler' and a reading lamp fitted with a Konkoly-designed ten-second timer. Also featured

was his public-proof coin-tosser complete with a magnetic target and what he called a 'Pi orrery' built around the gear ratios of ${}^{22}/_7$ (= π to two decimal places) versus ${}^{355}/_{113}$ (= π to six places).

Also on offer we had **Frank Singleton** whom had arrived on the day with his lovely wife **Tree**. Frank had brought us his German King Tiger Tank by Michael Martin in 1976 and featured way back in CQ19; Frank says the turret wasn't buildable without a pair of SMG high-access spanners!

Moving on again, we encounter **John Sinton** with his 1:24 scale WD 2-8-0 'Austerity' loco & tender, a Fairburn 2-6-4T loco, both nicely presented in traditional Meccano red & green livery. There was also a 1954-1962 No. 8.17 Road Sweeper, one of John's favourite models and was apparently based on a 1948 Thorneycroft-Lewin machine.

The Sheffield Meccano Guild Journal No. 126, June 2016 Hellmuth's collage of countenances



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Laughton in colour 4: even more models

- 11. Paul Robertshaw's Furniture Van from blue & gold times is posed during loading. (RM)
- **12.** Two of **John Bader's** array of small models were these: a Magic-powered man (who must have had a bad limp with that stiff leg) with a barrow for stability and horse with hay cart. (RM)
- **13. David Wilkinson** presented this twin-track simplicity ball roller with helical lifter which wasn't too far removed from Les's machine on page 5. (RM)
- 14. Eye aye! Using his trademark mix of systems, **Tim Martin** had built this motorised kaleidoscope. The prominent belt drive slowly rotates the 'scope's end cap. (RM)

Another West Yorkshireite is **David Wilkinson** who showed us his ping-pong ball roller and an automatic forward-reverse gearbox. Originally having a single run, the roller was by Subrata Ghoshal (India) then outlined on 'Spanner' where there was a suggestion to place the lift in the centre with a run-down either side. David used yellow, blue and orange balls to add colour and the helical lifter was made possible by Flexible Strips. The auto gearbox was taken from the April 1967 *MJ* although the motor has been repositioned since its last SMG outing to give a more compact look.

Remaining in Yorkshire, we now go to the sunny South and Sheffield's **Ken Ashton**. He had two models, the first being his incredible Batho Z5E road roller. This model was from an 1820s design which had independent springing on three axles and a chain drive via two clutches. The other superb model was his Lordon Steam Carriage which Ken described as an 1824 machine with five walking 'propellers' on a three-wheeled chassis.

That's me done, over 'n' out and now to the next 'unfortunate victim' whom Rob bribed into doing a model report. As for me, if I'm not threatened by cheese depletion he utters the immortal words "Earn your ad". I'm now off to sell more rusty bent **Brian Chaffer**, oops, sorry Brian as I should have addressed you by your now preferred name of 'The Engineer'. [Ed. 'Ere we go...] Well, 'The Engineer' displayed a modified and improved version of the No. 10 4-4-0 loco & tender with $5^{1/2}$ " driving wheels and powered by a 12V geared motor.

Colin Milne showed two models from very recent sets, the first a black & white rocket on its launch pad and the other a mainly zinc Tower Bridge.

Rob Miller had his 1930s carousel with six M&S aeroplanes (two each 'Red Arrow', Sopwith 'Camel' and 'Harrier') flying around a tower built from green Strips located on a yellow base.

Bob & Anne Seaton brought to the meeting a 1968 No. 7 Land Rover in yellow & silver. They also displayed a pleasing 3¹/2"-gauge 0-6-0T loco of definite Derby-built, Midland Railway outline. Built ten years ago, it had been borrowed by others keen to build their own and had been only recently returned. From a 1950s *MM*, Bob also displayed an office chair, a blue & gold lawn mower built by his grandson and a Magic-driven man digging up the road. There was also the fascinating blue & gold football game that I wished was a bit bigger! [Ed. See this issue's centre spread.]

Strips to the unsuspecting SMG public so byee!

Hmm, thanks Lesley - I think! Albert has the unenviable task of following.

Gregg Worwood displayed his superb 1920s 50-ton narrowgauge type 'B' 'Climax' log-hauling locomotive built to a precise scale of 1:9.428 from some model engineering drawings. Modelled in red, green and yellow it had inclined cylinders and Gregg used Helicals instead of Bevels for the final drive.





Barrie & Iain McKenzie displayed a pair of rescued shop window models of a yellow & silver stage coach and a traction engine. Barrie also trotted out a Fire Engine and Iain his narrow-gauge 2-4-OT on Hornby track which was based on an Isle of Man Railway loco.

SMG regular **Paul Furness** hadn't been able to devote as much time to building as he would have liked but still managed to produce a contest entry.

Visitor **Roger Burton** had a one-way windmill in dark red, green and gold from the December 1987 *SMGM*. There was also a hand-cranked helicopter on a base from a Sid Beckett design.

Finally, I now know why the Model Forms are so important! I soon became lost, especially when the modeller wasn't with the model so it couldn't be lifted for further examination...

Thanks Albert; we will now hand over to Tony.

My first visit and first job as trainee *SMGJ* 'hack' was **Stefan Tokarski** and two models both resplendent in their trademark polished finish, mechanical precision and artistry. First was a man on a treadmill, looking a lot happier than he should



with such a Herculean task ahead of him. His motive power was from the rim of this great model which was based on one by Georg Eiermann of Fellback, Germany. Stefan had changed the rim surface from Flat Plates to Braced Girders and added the man. Alongside was a model that at first

Laughton in colour 5: even more models again

- **15.** One of **John Sinton's** favourite models is the Road Sweeper from the 'proper' No. 8 Set. He said that though it was a good representation of an actual machine from the confines of the Outfit, there is plenty of scope for a better job when parts aren't restricted. (RM)
- **16.** Bob Seaton added this one from a 1950s *MM* to the plethora of Magic models. (RM)
- **17.** No matter which way the handle (at the rear) was rotated, **Roger Burton's** windmill sails always turned in the same direction. (RM)
- **18. Frank Singleton** would have really struggled to build this angular King Tiger Tank without some official SMG tooling... (RM)
- 19. The Batho Z5E must have been a real steam-powered beast to be built by Ken Ashton. (RM)



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Next on this amateur journalist's trail were two lovely models in red & green by **Roy Smith** who said that both had been built for exacting reasons to form the basis of a talk he was to give to his local Mothers' Union. His talk will share his recent return to Meccano and he explained that each model has a particular relevance to the lives of the group's members. Model no. 1 on his inaugural lecture tour will be his natty and realisticallyworking sewing machine as inspired by his wife's

Laughton in colour 6: yet more models

- **20.** The familiar outline of a typical Derby-built o-6-oT from **Bob Seaton**. (RM)
- **21. Roger Burton's** public-propelled (and public-pounded) grounded helicopter. (RM)
- **22.** From **Barrie McKenzie** was this red & green No. 6 Outfit Fire Engine. (RM)
- **23.** The TIMS Meccanuity theme of Land Rovers was certainly popular and **Bob Seaton** chose the later No. 8 Outfit model which although not explicitly stated as a Land Rover, was clearly based on one. (RM)
- **24.** IoMR 2-4-oT by **Iain McKenzie**. Although an old model, your scarlet-faced Ed didn't deliberately derail it from the Hornby track in a fit of ageist pique... (RM)
- **25. Ian Brennand's** latest dainty Citroën models will be in a future *SMGJ*. (RM)
- **26.** Tucked amongst **John Bader's** handiwork was this tiny paddle steamer. (HK)

own machine used for quilting. It had been strengthened with some 7¹/2" Strips and the Magic Motor carefully located to give the optimum Driving Band tension. Tempted to use an electric motor, he felt that clockwork adds to the vintage feel and that this model was the perfect excuse for him to use some newly-acquired Slotted Strips. Next in his talk will be a 1956 No. 7 Double-Deck Bus which has been built largely as per the Manual with roof corners filled by older Flexible Plates. Roy said the instructions are OK but photographs from other directions, notably the driver's side, would have helped. This model will represent a



'Trent' bus on the No. 1 Derby-Alfreton route which passed through his village and he hoped the model will trigger some lovely memories for the audience. It's brilliant that Meccano can be used to capture imaginations and hearts even now!

Journalistic destination number three was **myself** and my vintage motorcycle with sidecar which had been documented in SMGJ125. I will add that I am still undecided as to its







fate and many at the meeting were adamant that it should survive intact. Crikey, the pressure...!

To my other neighbour and the first person I exhibited alongside as a newcomer, **Ian Brennand** with two quite gorgeous and beautifully-presented Citroën 2CV motor cars. One was a 1958 Post van and 1959 Royal Marine pickup. Ian confesses that Citroën is more than a passing interest [Ed. I think we may have noticed!]

and these two models with their clever blend of materials and meticulously hand-painted body parts are due to feature in a longer article later this year.

Nearing the end of my first reporting stint and gaining in investigative vigour, I catch up with **Bob Watson** and his display of engines, vehicle and boat. The yellow 'National Benzole' bulk liquid transporter caught my eye with its contrasting red wheels which was based on a restored Seddon Atkinson lorry. Inspiration was also from a 1960s No. 4 model and a Dinky Toy but with some colour embellishments. Wonderful!

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Alongside the Seddon rested a beam engine from a Brian Rowe design and a tug boat built entirely from scrap or refurbishment-ready parts which gave the model a genuinely realistic working life aesthetic. Bob mentioned that old, brittle Motor Tyres had found a new home on the tug's side. Perhaps we should check our own scrap boxes and look afresh at those sorry parts we thought had had their last hurrah!

Time, then, to end my reporting duties. It is a fact that I build

models that are best described as 'mechanically challenged', i.e. static and devoid of any of engineering's finer details so are a contrast to the final model in my area, a model that can only be described as a sheer rhapsody in Gears. Gears that shift, synchronise, mesh, engage and move so as almost to be in ballet with one another. I have no qualification to begin to explain the rich detail, the balanced movement, scale and precision that is **John Ozyer-Key's** Tatra 8x8 Pipe Carrier.



Laughton in colour 7: yet even more models and builders

- **27. Bob Watson's** Seddon Atkinson road tanker was scaled up from a Dinky Toy. (RM)
- 28. Peering down on Tim Martin's automated kaleidoscope twiddler. (HK)
- 29. Gregg Worwood with his type 'B' two-bogie 'Climax' articulated loco. (HK)
- **30.** Working closely with Howard Sie, **John Ozyer-Key** is rebuilding Howard's famed Oshkosh; this is one of the massively-built, steerable driven axles with incoming differential. (RM)
- **31. Philip Webb** showed these bikers that you wouldn't want to meet on a dark night the two motorcycles would be terrifying enough but you have to marvel at the clever use of parts. (RM)
- 32. Built for the Meccanuity theme was Alan Lovett's large-scale open-topped Land Rover. (RM)
- 33. Would John Nuttall be a strong auction bidder for this Elektrikit? (HK)
- **34. Brian Chaffer** seems to be applying himself to the improvement of No. 10 models and the latest is the 4-4-0 which was clearly based on an SR 'Schools'. (HK)





John, however, calmly described it as built from 1950s red & green and with eight-wheel drive using Tatra-style differential steering on the front four wheels, six-speed & reverse gearbox, 'Hiab' crane operated by cord and outriggers that extend then lower. All functions except outriggers were radio-controlled. It was a beautiful job and, for myself who managed *twice* to get the classic Motor Chassis to steer opposite to the steering wheel, this was nothing short of inspirational - wow!

Thanks Tony for concluding our Laughton tour.

Briefly to business and an unruly auction After the donkey-stabbing contest (read all about it starting opposite) that began a touch later than the planned 13:30 due to its last-minute admin, the assembled membership was subjected to a business meeting but luckily, there wasn't much to cover. The traditional welcome to new faces was extended to Alan Lovett and apologies had been received from Brian Ashton, George Roy (sunning himself again) and Roger Thorpe (working). The Committee members had nothing to add so straight on to remembering two of our Meccano friends whom we wouldn't see again: Geoff Wilson and, to the surprise of many, Michael Denny. A tribute to Geoff was in SMGJ125 and to Michael is on page 31. To more palatable matters, our smashhit sweet & savoury saviour David Miller was rightly treated to rapturous applause! Other events included NEMS at Beamish on the same weekend (hence only a few at Laughton from their direction), TIMS at Meccanuity, CAM at Calais and Skegex. Bob Seaton said that a show at Barrow Hill is unlikely in 2016 due to work for a new exhibition hall and Russ Carr pointed out that the SMG is one of the few Meccano clubs not to organise its own

annual show which is something we will consider. The buoyant state of your *SMGJ* was affirmed. Finally and back to Skegex, an interesting proposition emanating from NEMS was broached regarding assistance to underwrite the Skegex costs as part of a wider scheme. Although the Committee was already aware of this in general terms, it was outlined to those present but as the SMG hadn't been formally approached with a plan, we couldn't really do anything more at the time.

In the somewhat trigger-happy auction, all but one of 25 lots were snapped up. Literature does seem to be coming more dominant these days and among the other natural trappings was something covetable - a decent boxed Elektrikit. Some of the contents were jumbled though after tidying, all appeared present including the normally snaffled Magnets. After some fervent bidding, it finally flopped over the finishing line of a realistic reserve. Total turnover was £196 with £156 paid to the sellers and the SMG benefitting by £40. We trialled running the admin in 'Excel' which, despite a few teething problems, did simplify the final calculations where a mistake could easily be made.

People began to prepare for home as the auction cashing-up was concluded and at 17:00 we were standing in a cleared hall with tables stacked next to the store room door - to the approval of the caretakers - and so ended another cracking 'Laughton Day'. Pictures by Mick Burgess with a further selection by your Ed are in the SMG's albums in the New Zealand gallery (thanks Bob!):

www.nzmeccano.com/image-100657

Telling Tails

John Wilson gets straight to the point of the April contest with pictures by Hellmuth Kohler

grand total of eleven contraptions were fielded by eight builders, three creators each trying to raise their chances by fielding two entries. At one end of the course was the heightlimiting portal for the entries to limbo beneath which some thoughtfully chose to demolish en route - and 60" away was a two-dimensional tailbereft comedy creature bearing a surprised expression courtesy of Bob Seaton's rather good cartooning. As a carrot to ensure notoriety, up for grabs was an offbeat three-dimensional shield featuring an amused ass and a plaque inscribed with SMG Comedy Contest, April 2016, The Winning Pinning! Now to John's view on the proceedings played out in front of a baying throng. All stated dimensions are from the target centre so the lower the number, the closer to the bullseve.

Each April for several years, Rob has succeeded in enticing us all to crawl around the floor behaving like young kids on Christmas morning. This year for once we have been allowed to play our annual game on a table top, saving arthritic knees and dignity alike. OK then, on with the motley!

Paul Furness sent *Chariot of Wire* off first, taking immense care. His model was to be set on its way when plugged in to a power supply (hence

the name) but even crossing the start line was somehow a challenge and Paul retired with as much pride as possible.

John Rodgers tried next with *Kick Up the Ass*, he also finding difficulty in crossing the start line. On the first run it went off violently and promptly tripped onto its nose. The best moment of the day came with the second attempt, when the mast deployed too early, leapt in the air and demolished the portal. It did no damage to the donkey...

 Paul Furness's Chariot of Wire is primed for glory before it decided to have a massive sulk.
 Kick Up the Ass from John Rodgers should have been Kick Up the Portal for this stunt!
 Complete with that familiar Army Multikit Cab, Iain McKenzies's Spike was the first to give that donkey some serious cause for painful concern.



To pin the tail on the correct part of the anatomy would be undignified but not unduly damaging. **Iain McKenzie's** *Spike* did altogether more hurt with its first run, hitting the animal later called Harold, straight between the eyes. Ouch! A Driving



Band came off during the second run but a hand push (allowed by our good-natured adjudicator) got the first hit of the day on the target, 26 mm from the centre and a bit high. The final run was also high and 27 mm away but at last we had a score to beat.

Rob Mitchell tried next, scoring 23 mm twice with *Stabitha*. On the third attempt, Lesley took over the 1A Clockwork Motor's brake to show him the way and scored a superbly small 8 mm. No-one does glee like









Lesley and her attempts to take away the trophy there and then had to be almost forcibly resisted.

Spring Fever, **my own** entry, came next and performed without distinction to score 50 mm, 39 mm then 19 mm, all too far to the left. Rob's relief at my failure was pretty evident! What is it that he has against the West Riding...?

In contrast to his first model, **John Rodgers's** second entry *Gerry Stringer* was less amusing but much more successful. He had a sedate first trundle to 30 mm, a malfunction of the masterector in the second but finally a grand 9 mm.

4. Mike Duncalf, Roy Smith and Paul Furness all ooze incredulity at the sight of *Stabitha's* 8 mm!
5. John Wilson takes aim with *Spring Fever*.
6. *Spike* by Pete Turner had no trouble with the distance but did stab a tad low.

7. John Rodgers' second entry *Gerry Stringer* enjoyed some success and would manage 9 mm. **8. Rob Mitchell's** *Jabba the Shedd* at the end of its third and final leisurely 5' trundle.

9. *A Tall Tail* by Russ Carr worried the rivals as much as it did the ass with this near-bullseye!
10. Those huge tyres and the top-secret, bleeping innards suggested Pete Turner's *Crusher* may have slightly transgressed the purity rule...

11. TIMS's hopes were pinned on **Alan Lovett's** *Telford Flyer*; this first attempt was a little short of the target so the threat from Shropshire was sent home with its tail between its legs.

12. SMG President Barrie McKenzie presents 2016's jubilant grinning winner **Russ Carr** with the comedy trophy for his donkey-work.

Pete Turner let loose his clockwork *Spike* which was evidently a popular name. Very smooth running, it covered ground without fuss but, after viciously activating the mast, knocked the target-holding pins from the board on the first run to manage 12 mm. After savaging the bridge which woke up the spectators, it scored 20 mm on the second stab. On the third, *Spike* jabbed a decent 10 mm.

The second **Mitchell** model,

No. 1 Clockwork-powered *Jabba the Shedd*, proved erratic. It started by missing the target but improved to a skim then stabbed to 10 mm. Perhaps he will explain some day why his vehicle was disguised as a building?

A Tall Tail was **Russ Carr's** entry and was also from the West Riding [Ed. Grrr]. Driven by a No. 1 Clockwork Motor, it was small, neat, looked suspiciously similar to *Stabitha* and very accurate. The first run scored a meagre 2 mm to the right, second 36 mm to the left and third 38 mm to the right to straddle the target better than anyone else.

Pete Turner's second entry, *Crusher*, was well named. It was big and powerful, punching the target

with fearsome strength. It was also the noisiest as with siren bleeping, *Crusher* forced its way down the track and hit the target each time at 15 mm then 11 mm before drifting away to 43 mm.

The final entry was **Alan Lovett's** *Telford Flyer*. The slowest but alas not always the surest, *Flyer*







Rodgers third. What were my overall impressions? Most contestants ran to the left so perhaps the table sloped slightly in that direction and metal wheels had too little grip to hold the trolleys on a straight course? Maybe the best entries used rubber-tyred wheels? Several contestants slewed the model when switching on the Motor due to the shiny table-top. All in all, it was a good competition and once again, not as simple as expected.

John Wílson

Thanks John and when it was over, Bob's handiwork with the donkey was decidedly pock-marked. Hellmuth later wrote *I enjoyed the competition but I forgot about it until too late to build anything. I had not even realised that getting the height right*

was a doddle (the swinging arms) but the lateral position needed good luck in aiming. I was astonished how many efforts were very close. Spot-on, Hellmuth! Planned for SMGJ127 is the annual *How They Did It* and a contest for April 2017 is already being plotted - more in SMGJ128.

RM

| began by going too far to the left to skim the target but subsequent runs veered further to | Running number | | |
|--|-------------------|--|--|
| the centre scoring an | 1 | | |
| on-target 50 mm then | 2 | | |
| 35 mm shy of glory. | 3 | | |
| 39 min only of group. | 4 | | |
| So this left Russ with | 5 | | |

So this left Russ with the (magnificent?) trophy depicting a deformed but jovial donkey. Rob (or was it Lesley?) was a good second and John

| The as-it-happened results table | | | | | | | | |
|----------------------------------|---------------|-----------------|----------------------------|--------|--------|--|--|--|
| Running | Builder | Contraption | Distance from bullseye, mm | | | | | |
| number | | name | Stab 1 | Stab 2 | Stab 3 | | | |
| 1 | Paul Furness | Chariot of Wire | -/- | -/- | -/- | | | |
| 2 | John Rodgers | Kick Up the Ass | -/- | -/- | -/- | | | |
| 3 | Iain McKenzie | Spike | -/- | 26 | 27 | | | |
| 4 | Rob Mitchell | Stabitha | 23 | 23 | 8 | | | |
| 5 | John Wilson | Spring Fever | 50 | 39 | 19 | | | |
| 6 | John Rodgers | Gerry Stringer | 30 | -/- | 9 | | | |
| 7 | Pete Turner | Spike | 12 | 20 | 10 | | | |
| 8 | Rob Mitchell | Jabba the Shedd | >52 | 52 | 10 | | | |
| 9 | Russ Carr | A Tall Tail | 2 (bah!) | 36 | 38 | | | |
| 10 | Pete Turner | Crusher | 15 | 11 | 43 | | | |
| 11 | Alan Lovett | Telford Flyer | >52 | 50 | 35 | | | |



By Graham Jost, Melbourne, Australia

Rollowing the successful miniaturisation of FKMs in recent times, I have had the idea of replicating that achievement in the field of braiding machines - these are typically rather heavier and more cumbersome than FKMs, and progress in this direction could be very helpful when transporting braiding machines to far places.



I am indebted to Jordi Vallès of Barcelona for a clever scheme for packing more braiding spools into a given area than usual, Fig. 1, which in turn can lead to a significant reduction in the footprint

Insofar as I have never really designed any of my braiding machines for portability, I thought that perhaps it was time to begin!

There are conditions to be met. First, the machine must still produce creditable braid as its output a simple threethread plait will not suffice! Secondly, it should pack within an ordinary suitcase, preferably without the need for partial disassembly. And thirdly, it should still use as many braiding threads as reasonably possible. As I have always used eight threads at the minimum, the present braiding machine, also braiding eight threads, meets all of these self-imposed criteria. It is braiding four-ply cotton to produce quite a substantial braid.



of the main braiding area (the deck) and hence the overall size of the machine. By increasing the number of forks per carrier, fewer carriers are required to accommodate the same number of spools. In my machine I am using four forks per carrier (rather than my usual two), along with just four carriers. This still allows the running of eight braiding spools for which, normally, eight carriers would be required. An overall view of my machine is shown in Fig. 2.

Fig. 4







But there is a potential downside to this arrangement. Each spool in a set of four spools progresses diagonally in a loop from one corner of the machine to the other, and back again, repeatedly. Those in the other foursome, at right angles, do likewise. All spools thus pass close to the centre of the machine, and indeed pass each other there, a situation that risks entanglement of threads and/or spools. In normal braiding machines, the carriers are arranged around a perimeter and so avoid this potential problem. There is also a need for the braiding threads to be drawn off from their spools at a significant angle in order to form a satisfactory braid. This is achieved only by those threads moving to the outer

Fig. 1. Jordi Vallès' braiding machine.

Fig. 2. The complete eightthread braiding machine and the subject of this article.

Fig. 3. The layout of the twelve Multi-Purpose Gears.

Fig. 4. The four rotating carriers and eight spool shaft assemblies.

Fig. 5. The initial drive from beneath.

Fig. 1 by Jordi Vallès; Figs. 2 to 10 by Graham



regions during their travel, when they pull tight the slack threads from those spools still passing through the centre of the machine. It was unclear to me as to whether this arrangement could still produce a satisfactory braid, but in the event I was pleased to find that it did.

The carriers are arranged in a square, and are driven by Multi-Purpose Gears (M-PGs) - one at each corner plus two idlers on each side inbetween making twelve in total to provide counter-rotation of adjoining carriers as required, Fig. 3. The carriers themselves comprise upper and lower Face Plates spaced apart by four plastic Spacers and each fitted with forks formed by projecting pairs of 11/2" Narrow Strips at 90° intervals, Fig. 4. The drive to the carriers is via a 50t Gear on one carrier shaft from a 25t Pinion - the Pinion shaft is therefore running at twice the speed of the carrier shafts. An accessible O-ring and Pulley drive beneath the machine connects the MeccParts 225 rpm geared motor and Pinion shaft, Fig. 5.

Oscillating switching rods direct the spools as required from one carrier to the next. These are located centrally on two opposite sides and in the

centre of the machine and must be operating at twice the speed of the carriers. A Single Eccentric mounted on the 25t Pinion shaft provides this drive requirement via a compound link (to dodge nearby shafts and M-PGs) to a 7¹/2" Strip connecting in-phase Cranks on all three switching rod shafts, Fig. 6.

The braiding spools themselves comprise plastic 1" Pulleys top and bottom, with two plastic Spacers in-between - duct tape secures all together, Fig. 7. These slip over the spool shafts, which are fitted

with 1" Bush Wheels to support them and which are, in turn, fitted with two 1" x ¹/₂" Narrow Angle Brackets. One of these points downwards and forms the tracking member to prevent unwanted rotation of the spool assemblies as they circulate; the other points upwards to receive the braiding thread. A short Compression Spring beneath each spool is compressed by a small rubber



Pulley on top to adjust the tension of the exiting thread to be just right - neither too loose, nor too tight. The spool assembly shafts are also fitted with felt-covered 1" Bush Wheels at their lower ends which slide over a 'Perspex' sheet¹ - this can just be detected in Fig. 1, and one felt-covered foot can be seen through the 'Perspex' sheet on the left in Fig. 5. Their location below the lowermost carrier Face Plates (and bossless Face Plates beneath to present obstruction-free surfaces to them) prevents the spool shaft assemblies from being raised by the pull of the threads as they are drawn

up into the braid. Plastic Spacers and packing washers as required fill the space between the fixed upper and lower 1" Bush Wheels on the spool shafts. A complete, loaded, spool shaft assembly is shown in Fig. 8.

The braiding threads pass from the spools through the upper holes of their Narrow Angle Brackets directly to the enmeshing point



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overhead - see the extreme left and right threads in Fig. 9. This arrangement, with the exiting points well down at approximately the mid-points of the spools, significantly reduces the sideways pull on the vertical spool shafts compared with that from overhead exiting points. No slack-thread tensioning devices are fitted.

Upper and lower surrounding restraining tracks are fitted. Both tracks serve to retain the spool shafts in place in their forks as they circulate and, in addition, the upper track provides a path for the tracking brackets to ensure correct orientation (i.e. towards the centre) of the thread-exiting points on the spool shaft assemblies as they pull away from the centre of the machine - without this tracking restraint, the spool assemblies rotate as they circulate, taking the spools with

them and leading to jamming. In Fig. 9, the near left and far right spools are at maximum distance



Fig. 6. A Single Eccentric drives all three switching rods.

- Fig. 7. An individual spool.
- Fig. 8. Sample spool shaft assembly.
- Fig. 9. Close-up of the braiding deck.

from the centre of the machine, their threads are therefore at their most taut and their exiting points are pointing directly towards the centre of the machine, as required. The orange and blue spools in Fig. 1 (and 9 & 13) show their tracking brackets trailing behind the spool assemblies.

The overhead drive is taken from the 50t Gear on the carrier shaft. This meshes with a 65t gear, followed by a 22t pinion and 15t Pinion, Fig. 10, to arrive at the lower end of a two-part, universal-jointed shaft drive to the top located at the centre of one side. A short left-handed worm on the lower shaft meshes with a 15t Pinion on a

horizontal shaft with ½" Pulley to drive the takeup roller via a slipping O-ring.







Fig. 10. Gear drives to the take-up roller and the overhead gearing. Fig. 11. Overhead drive to the pinch rollers.

Fig. 12. Pinch rollers. **Fig. 13.** Pinch roller springs.

Fig. 14. Completed braid on the take-up roller.

The top of the upper vertical shaft is fitted with a 15t Pinion driving a 25t Contrate on a horizontal shaft just below the topmost structural member, Fig. 11. At its other end a short lefthanded worm drives the 25t Pinion of the pinch roller in the centre overhead position.

Completed braid is drawn off overhead at a constant rate, firmly sandwiched between the driven 25t Pinion and a spring-loaded plastic 19t Pinion completing a pinch roller pair, Fig. 12. Two Tension Springs ensure that there is





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absolutely no slippage of the braid as it is drawn upwards between the Pinions, Fig. 13. It is essential that the rate of drawing-off is such that the completed braid never forms below the hole or ferrule in the horizontal Strip through which it passes. Should that occur, entanglement of the threads ensues almost immediately, bringing the process to rapid halt. On the other hand, it is desirable that the drawing off is not so fast as to result in the formation of a loose braid. It's a bit of a balancing act to get everything just right, and is somewhat thread-size dependent.

The completed braid then passes across the top of the machine, around a ¹/2" Pulley and then down to the belt-driven take-up roller at the side of the machine. A curved bar above the roller ensures a neat linear lay-up of the completed braid, Fig. 14, and the slipping belt drive maintains a modest tautness on the incoming braid at all times, irrespective of the diameter of the stored braid. Interestingly, the braid is actually square, as can be ascertained by gently rolling it in the fingers.

This relatively compact braiding machine is 10" long x $7^{1/2}$ " wide x 11" high, 250 x 190 x 280 mm. It weighs just under 7 lb 10 oz, 3.5 kg fully loaded, and will pack on its side, complete, into a suitcase with room to spare - hence the title of this article!

Stills and a movie of this braiding machine in action can be seen at:

www.nzmeccano.com/image-92794

¹ I am indebted to Doug Trounce of Dubbo, New South Wales for this suggestion, which has proven a winner thus far!

Graham Jost

The Illustrated Meccanoman's Dictionary: P

Plastic Meccano to Plugging

- Plastic Meccano. Big pieces for little hands (right), made in Liverpool and Calais, the latter eventually replacing it with Meccano Junior.
- Plastic Plates. Pt Nos. 194 to 194e. Thin, opaque non-metallic Flexible Plates in a variety of colours.

Tend to be a bit too brittle, especially with age.

- **Plate.** A generally **flat** part in rigid, **Flanged**, Circular (right), Strip, Triangular and Flexible variations.
- Play-Doh. Another

product bought in by **Binns Road**, this one failing when they meddled with the recipe causing it to turn to Play-Tungsten Carbide.

PLC. Abbr; programmable logic controller, below. An electronic device incorporating a

degree of **feedback** for automatic control of a model, machine or process.

Please do not bend. (1) A request added to envelopes then



often ignored by the **Royal Mail**. (2) Apply to 24¹/2" **Angle Girders** and 11¹/2" **Axle Rods**!



Pliers. A brutal member of your **tool** collection, right. **Plimpton**. See **Bayko**.



Plinth. An elevated foundation. Ploughing engine. A road locomotive with a large horizontal winding drum usually slung

underneath the **boiler** barrel for hauling a plough across a field, right. A second engine pulls it back again, repeat.



Plug. (1) The male (slightly crude but remember; sticking-out bit) of an electrical connector. Fits in a socket (non-sticking out bit). (2) An LMS ad, below...

Plugging. To momentarily reverse the polarity to a motor to stop it suddenly and a cruel form of regenerative braking. *RM*



LMS Lesley's Meccano Sales

6 Greenland Way, Maltby, Rotherham, S66 7ED **T:** 01709-816769 **M:** 0758-3082330 **E:** calamityjane70@talktalk.net

I can supply a range of boxed sets, recent production in particular. Parts, literature, motors etc are also available at favourable rates and LMS is the sole distributor of 'Robbits' brass parts. I 'open shop' at various venues and haggling is part of the fun. A dynamic stock situation means no lists. Visitors are welcome but by prior arrangement please.

Miscellany 126

Geoff Wilson

Confirmation of our pal Geoff's funeral arrived too late for inclusion in SMGJ125; it was on the afternoon of Friday 22nd January at Mansfield & District Crematorium. As our mutual hobby was a major part of his life, several of his Meccano friends attended to make around half of those present and spoke during the proceedings. That's as good a sending off as it gets from Meccanoland.

New members

They keep coming! Now safe in the SMG's embrace are **John Knight** (Dorset, UK) and mechanism maestro **Chris Shute** (Shropshire, UK).

125 arrives!

It's no wonder John Ozyer-Key was the first to respond as his was one of the earliest to leave Maltby Meccano Works. Other responders were **Pat Briggs**, **Pepe Ferretti** (*I much like the mag as it's a good-quality reference of current Meccano modelling*), **Chris Fry** (*I really enjoy the SMG Journal and look forward to future editions*), **Philip Webb**, **Alan Wenbourne** (...another great issue, still reading it! he wrote over a week after sending) and **Eric Wright**.

Ken McDonald e-mailed mere hours after the bulk of 125s were sent on their way. No. 125 arrived in good order and as usual is a joy that will provide many hours of delight. I am most grateful for including our Scone report and making such a good job of it, as you clearly have plenty of good copy to fit in - surely the sign of a very successful publication. I particularly liked Tony Seed's contribution. His motorcycle is a visual delight and it is so good to see him duly rewarded with the President's Trophy. For a

relative newcomer to the hobby he is producing most impressive models. I also much liked his big gun which I had the pleasure of viewing at Laughton last year and his skeletal elephant displayed an imaginative use of common parts to good effect. It is a great encouragement to those of us who, either for considerations of age, space or limited parts, need to work at a small scale. Ken pointed Tony in our direction a couple of years ago and was ordered to repeat the escapade as often as possible!

Our esteemed colleague (and CAM's new Editor) **Jean-François Nauroy** wrote. *I have received issue 125, magnificent as usual. Just a question for the Editor,*

why is your text left-aligned and not justified? Thank you Jean-François and to answer your query, there are no strong reasons other than if a text column is narrow, long gaps are inserted between words. Also, it can look a little formal. Does anyone have a preference or opinion? If so, please say! In the meantime and as an example, Miscellany 126 is fully-justified. It is worth reiterating that CAM produces a splendid, fullcolour quarterly magazine; page 63 has the details. Albin Treil receives CAM's exchange copy and acknowledged receipt in late January with It is not yet too late to wish you and all the members of the Sheffield Meccano Guild a very successful - and Meccanoful - 2016. It wasn't too late and the sentiment was returned on the SMG's behalf.

Without sparing a thought for your Ed's sanity, **Mick Burgess** wrote *Thanks for 125, another superb issue and I am still reading it. Sorry to tell you that a couple of errors have crept in. Page 41, lower picture; the centre loco is a Jubilee 45690* 'Leander', an easy mistake as it is painted the 'wrong' colour! Page 13, bottom left picture is not my model of the 1935-6 H13 Motor Coach but Bob *Seaton's No. 5.6 Saloon Coach from the 1937-47 manuals or No. 5.5 from the 1949-53 Manuals. The photo is of my H13; many of the parts are Strip Plates which makes it quite sturdy.* A picture of Mick's bus is below (or is it of Bob's...?) and another loco-based clobbering is on its way.

Those who renew before a February *SMGJ* arrives may not know that they are sent to all, including those who had not yet renewed; theirs has an invite to do so and a 95% renewal rate is typical. As **John & Cynthia MacDonald** signed up for 2015, Cynthia was treated thus and she replied: *Thank you for the latest Sheffield magazine - I didn't think this could be improved on but you've done it. I shall not be renewing my membership of*



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The Sheffield Meccano Guild Journal No. 124, October 2015

the SMG. I would like to say thank you to everybody for the wonderful years John and I had with you all - it was a great life - who would think that so much fulfilment would come from a few strips of metal with holes? I do hope that lots of people have as much pleasure in your company as we did and I wish a long and prosperous future. Please give my regards to 'the tribe'. With grateful thanks and very best wishes,



Cynthía

Cynthia's note concludes a long, valued association between herself, John and the SMG. On everybody's behalf, your Ed wholly reciprocates her closing sentence and intends to stay in touch.

This editing lark can soon land one in a doghouse (in this case, **Anne Seaton's**) and also in there is **Paul Furness**. In 125's Laughton pages, Paul inferred that the cows adorning her model were on a one-way trip to a pie factory. Grabbing the bull by the horns, Anne claims that they were really being mooved to another field with greener-thanhere grass. A vital correction that had to be made...

Thoughts of no further disasters were scuppered by **Les Megget** who knows what it's like in an editorial 'hot seat'. *SMGJ125 arrived early this* morning and it has plenty of reading as per usual and some lovely photos with your adjusted camera. Two things I've noticed though ("Oh hell!" I can hear you saying). First, the mobile crane rendition of the Dinky Toy Supermodel (page 9, Bob Watson) is definitely designed by our own Bruce Geange. Second, the six-speed gearbox on page 10 attributed to Alan Wenbourne isn't his. I'm convinced it's a Richard Payn design; see my image [above] which dates from 2002. It also appeared in CQ a few years back. I dream about Meccano gearboxes and I've built this one a couple of times! I don't know who proof-reads SMGJ but I'm always amazed how many errors Bruce finds in my NZFMM Mag. Really looking forward to Skegex, where I will know a lot more people than on our 2008 trip. Les can be assured that the cry of exasperation was actually more industrial! Despite desperate blame-passing with threats to sack the ever-relaxed Russ and contrary to best efforts, not everything can be checked. Nevertheless, a correction is better than nothing so onward & upward or occasionally downward.

An e-mail from Graham Jost. Once again I'm astounded at the detail that John Learman can muster re those 'Meccano' tyres - it reads rather like a detective story! Thanks for doing my 'Twister' article justice; it was at Colac and ran for the duration without demur. I enjoyed the motorcycle and speaking of such, have you seen the latest NZFMM mag? Les Megget has a detailed write-up on his small 'Healy. Gosh, it is a beautiful model and even better than his original, larger, version. [Ed. Wait for SMGJ127!] Back to SMGJ, I continue to enjoy the detailed accounts of Laughton and other gatherings where your several slaves do a wonderful job of conveying the succinctness of all. I'm quite looking forward to the entries for the 'Pin the Tail on the Donkey' which should give rise to some weird and wonderful contraptions! Pics attached of some of

> Colac and note the trouble our train man takes to set his Ogauge layout. This is normal and he does it in this detail for each and every show we participate in. Colac is staged by the MMCI and among Graham's pictures were one of his horizontal French knitter, now fitted with a 'feed me' endof-yarn detector (left) and the Hornby expanse (overleaf).

> **Frank & Tree Singleton** found their 125 was inverted. *I* withdrew the said publication upside down from its envelope



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(as you do) and came across those five Girder Frame models. Such ingenuity and I award the 'Singleton Shortcake of Difficulty' to their builders! Looking through the models, I found two that I haven't got described, Eric's Loading Shovel and David's Tippler, as I've only a reproduction No. 10 Manual (13/749/3); I suspect there are lots of others. Another page of Girder Frames so another 'SSoD' to all the builders. Scone seemed like a good do and I hadn't heard about Geoff Wilson until I went to Oxton; such a good man. 'A Vintage Motorcycle' by a 'Meccano newbie' is a likely story! A fine write-up indeed, Tony should be proud and maybe he's a good man to talk about his coming into the hobby. A good selection of very nice compact ball rollers and Mary Jost's 'Meccano Bling' is appealing! All in all a fine Journal. David's model, officially called a Rotary Truck Tipper, was No. 7.5 in the dark red & green era. Although not the largest or most complex for the top Outfit of the day, 7.5 is an agreeable model.

Ken Ratcliff was another to haul your luckless Ed over a tenderful of coal. Where? Barrow Hill. Such a lovely scene, the conjunction of two glorious hobbies, trains and Meccano. Then, eagerly reading your captions, shock! Horror! Oh, if only the poor lad knew but he was born too late. You didn't realise (at least when writing the caption) what a rare scene you were witnessing. A glorious Stanier 'Jubilee' in steam and in a seldom-seen (for that class) livery. Oh, little did you know and there in its elegant lines, alongside the burly, handsome Duchess and next to the 'Flying Pig' 2-6-0 and you called it a 'Black Five'! Number 45690, 'Leander' by name, was built in the thirties as a 'red 'un', for obvious reasons and after the war could have been in the LMS 1946 livery of black with red-edged-with-straw lining. At nationalisation, other liveries were tried including the depicted BR mixed-traffic lined black which was nothing less than LNWR livery though probably with a bit less varnish. Not all

Jubilees were painted thus though I remember seeing one or two like that with the full 'British Railways' on the tender. The Jubilees, however, quickly adopted the standard express loco livery of GWR green with orange & black lining as displayed by 'Duchess of Sutherland' alongside. However, the point is that when there is no colour differentiation, the Jubilee can be mistaken for the 'Black Five' - similar size, both are 4-6-0s, both displaying the usual Stanier lines as beautifully illustrated by your pictures of the 8F, the 'Black Five' and the 'Jubilee' - though the Duchess is never going to be mistaken for anything else. Mechanically, the big difference is that the 'Jubilee' has three cylinders which make it sound quite different and its throaty roar when working hard is not likely to be mistaken for an LNER three-cylinder job. I have a vivid memory of our school trip to, among other places, Millhouses Depot on the climb from Sheffield Midland to Dore & Totley when we, inside and jotting numbers as you did, heard this characteristic roar and we all rushed to the open area to see a 'Jubilee' pounding up the bank with a long train of carmine & cream coaches, filling the valley with its echoes. The key distinction, especially when you are not close enough to see if it's named, is that the boiler handrails are halfway up the side whereas on the 'Black Five' and 8F the handrails are much higher as your photos illustrate in both cases. I'm sorry you were taken in by the black livery but the other wee correction is that the 'Jubilee' was power class 6 in BR days but the short-lived, indeed for that class, experimental lined black never invited the appellation 'Black Six'. A further point is that, on our wetter side of the Pennines, the Ivatt class 4 2-6-0 was not a 'Mickey Mouse' but a 'Flying Pig' or 'Mucky Duck'. 'Mickey Mouse', to us in our pacamacs and sou'westers, referred to the smaller Ivatt Class 2 2-6-0 (464xx), the BR standard eauivalent (78xxx) and their tank loco equivalents. I know, somehow, that if you had been born earlier, you would have known these things and more. Finally, a nice sort-of coincidence: 'Leander' was based for most of its life (post WWII) at Barrow Road shed in Bristol and trod the Midland's Bristol-Birmingham-Derby-Sheffield-York lines. Finally, it's reassuring to see railways and Meccano overlapping like *this.* For being born too late, I blame my parents...

Binders, anyone?

Bob Seaton has looked into bespoke binders to house a run of twelve *SMGJ*s. We would have to place a minimum order of 50 and initial enquiries suggest a price of \pounds 7 each plus delivery. We need firm expressions of interest before committing which should be sent to Bob, page 2. \mathcal{RM}

Michael Denny, 1936-2016

Should you read *CQ*, Michael Denny will need no introduction. For those not acquainted, Michael was an affable, bearded, witty and entertaining literary ability, creator of agreeably daft acronyms and prodigious builder of whimsical and necessarily robust models to engage the

handle-turning public. He had also been an SMG member for several years. Michael was diagnosed with cancer in spring 2015 then received treatment; initially successful, the monster returned and he succumbed at his Liskeard home on 2nd April 2016, a fortnight shy of his 80th birthday.

Becoming a farmer by trade ("Those bullocks are b....v heavy, Lesley!"), Michael's Meccano career began in the 1930s and when Meccano was in short supply in the 1950s, the young Denny resorted to scouring local junk shops and dumps to augment his collection. He first joined the SMG in its early days. Quirky models poured forth in *SMGM* then CQ, one of the first being a 'Mamod-Powered Impact-**Reversing Steam Tricycle**' that unforgettably managed not to ...wheeze to death somewhere in the unreachable depths of under the kitchen table (SMGM21). Not averse to following Frank Hornby's advice of using cardboard, one of his last models - a wind turbine - was built around a fence post to stop it flopping over. Michael's output between these extremes can be enjoyed through a thirty-year run of SMGM and CQ. He took over the regular News and Views slot from Bert Love where he would regale the





reader with tales of taking an elderly Volvo laden with models to what he termed an 'exhibish'; models from common parts for giving to young boys (GROPE; Gets Rid Of Parts Expeditiously); not entirely rose-tinted reviews of recent output sold under the 'Meccano' name; models built for his local museum; outings to Trago Mills to sample the latest Meccano (etc) and improving lacklustre modern offerings with a few proper brass parts to survive handling by his grandson. Quite how that repeatedly model-laden Volvo, with bumpers tenuously held on with duct tape, evaded the

scrapyard and Police when beyond Trehale Farm was a cause for wonder...

Most of us will have bumped into Michael (and his models) at Skegex where he would be probing the innards of a construction that he particularly liked then merrily scribbling on a notepad. What went unseen to many was the subsequent transcription, Michael hammering away on a clunking elderly mechanical typewriter at dawn; he was completely e-detached and proud of it! The end product was always eagerly awaited. For more on one of Meccanoland's most eloquent characters, you can do no better than peruse the CQ Special written by Michael in his congenial style, The Invention of *Meccano*; he and *CQ* were almost joined at the hip. Michael is pictured in a contemplative mood at Skegex 2014 and his publicpropelled beam engine at Skegex 2013.

Heartfelt condolences are offered to his wife Cretia, daughters Esther and Anna, sister Liza and brother Nick. Meccanoland puts down its Spanners for a minute's silent reflection as it will never be the same again. On behalf of the SMG, 'bye Michael; you, your models and your prose will be sorely missed. *RM*

It's a Funny Old Game (.... of Table Football

If it had gone in the net, it would have been a goal by deviser, builder & tester Bob Seaton

Main pic in two halves (and the others) by Rob Mitchell

> **Fig. 1.** Reach for that box of Braced Girders! All of the upper constructional features are revealed by this view.

s often happens in the lull betwixt the Christmas and New Year celebrations, one's attention begins to wander through a gamut of reruns of ageing movies or crass game shows etc on the TV, through excess alcohol intake (in some cases), plain mischief and, oh yes - the building of a new Meccano model! Now, the old grey matter has received a prod in the right direction but what would the subject matter be? Maybe a vehicle, locomotive, crane or just something simple that could be put together in a few hours rather than a few days? That, I hear you say, narrows it down a bit... Usability and a certain fun element would also fit the bill. Hence the subject noted at the head of this article - a table-top football game! It would have to be compact (for ease of use and possibly transportation) and so the number of 'players' would have to be set at three plus a 'goalie'. In general terms, the constructional details are as follows.

The base comprises two 18¹/2" and two 12¹/2" Angle Girders joined at their extreme ends by their slotted flanges, the upper surface being completely filled with 12¹/2" Strip Plates. Each Strip Plate is supported by a 12¹/2" Angle Girder (see Fig. 2) and, at the outer edges, a Washer inserted between the Plate and the Girders (using the retaining Bolts) to create a large radius which causes the ball to naturally roll back to the main playing area. Additional Bolts are required to maintain the 'pitch' in good condition but their location should follow the pattern shown in Fig. 1 to avoid contact by the players.

Lower sides are filled in using Braced Girders (two $9^{1/2}$ " are ideal but any combination will work), joined at the corners by $3^{1/2}$ " Angle Girders. To reinforce the lower edges of the Braced Girders, three transverse $12^{1/2}$ " Angle Girders are attached using Angle Brackets. The lower ends are filled using $12^{1/2}$ " Braced Girders. Upper sides are similarly filled but the ends use $3^{1/2}$ " Braced Girders at each side, thus leaving a central $5^{1/2}$ " gap for the goal mouth.

Goal posts are represented by two vertical $3^{1/2}$ " Strips connected at their upper ends by a $5^{1/2}$ " x $1^{1/2}$ " Double Angle Strip, two $2^{1/2}$ " Strips and by two Angle Brackets to the $3^{1/2}$ " Braced Girders. The two $2^{1/2}$ " Strips are also joined by a $5^{1/2}$ " x $1^{1/2}$ " Double Angle Strip and two vertical 3" Strips bolted to an upturned $5^{1/2}$ " x $2^{1/2}$ " Flanged Plate. This Plate (which also acts as a ball receptacle following the scoring of a goal) is attached to the end 12¹/2" Girders and is supported centrally on the underside by a 2¹/2" Strip attached to Angle Brackets. Also attached to the Flanged Plate is a Bell Crank with a 2" Axle Rod which provides the pivot for the goalie's handle. The handle, a 7¹/2" Strip with a Sleeve Piece, is retained by a Collar and the goal is completed by addition of a Cord 'net', Fig. 1.

Operating rods for the players are supported in the 1" Corner Brackets and Triangular Plates fitted to the top edges of the sides as shown and are made from lengths of $5/_{32}$ " or 4.0 mm silver steel. Two 11¹/2" Axle Rods could be used but the join would produce a weak link. Couplings retain the players, while Collars at one end prevent dislocation of the rods. The handles consist of Sleeve Pieces supported at the outer end by a 3/4" Flanged Wheel and at the inner end by a Chimney Adaptor retained by a Collar.

The two teams each comprise three players plus a goalie and two distinct colour schemes should be used. 'Shirts' for my two teams are gold and red (with green for the goalies) but other combinations are equally suitable. The upper body (or shirt) is made from two Flat Trunnions bolted together to form a square (note that two of the Bolts are ³/₄" and join the players to the Coupling on the control rod). The head is a bossless 1" Pulley (again, two different colours could be used) and is fixed to the body by a Fishplate. The Bolt retaining the

Fishplate also retains a 2¹/2"

Fig. 2. Lots of transverse 12¹/2" Angle Girders reinforce the 'pitch' underside, ends and base. Note that the Strip Plate ends are spaced away from the sides by a Washer thickness.





Stepped Curved Strip to represent the arms, Figs. 1 & 3. Legs are two $1\frac{1}{2}$ " Strips bolted to the lower corners of the body and are joined at the lower end by a $2\frac{1}{2}$ " Strip which acts as the feet. Attached to the back of each leg are two Couplings which act as counterweights.

A 'scoreboard' is added at the side of the goal at each end of the field and comprises a 3½" Angle Girder bolted to the top edge of one of the 3½" Braced Girders and supports a 3½" Strip (spaced by two Washers) which in turn carries a Slide Piece. The Slide Piece is used to indicate the score as required.

Fig. 3. Both sides of the 'players'. Other than common parts, each takes five Couplings; one to secure him to the rod and four as counterweights at the 'feet' which also serve to give the ball a wallop. → Fig. 4. Bob's football hooliganism! After scraping some of those nice blue & gold Strip Plates with the 'player's heads, he admitted that there was room for improvement: options are to slightly raise the rods, shorten the 'players' or limit their rotation.



A suitable ball is an obvious requirement and several have been trialled. These range from lightweight ones sold as cat toys (!) to heavier (and *very* bouncy) of various sizes. I have found that a bouncy ball of about 1" diameter will work and can be found cheaply at most toy shops.

This football game not only works but can provide endless hours of fun. It made its debut at the NMMG's January 2016 meeting at Oxton and had been requested to appear at the NEMS March Bedale meeting for a rematch. Have fun!

Bob Seaton

By Ken Ashton

aving rebuilt my Hornsby Chain-Track Tractor (SMGJs120 & 121) to a slightly smaller and more handleable scale, it now operates as it should - it runs on its tracks! One feature of this modified model relates to the track brakes. These are not friction brakes with bands wrapped around drums which can put severe strains on the drive axles but geared which are simple and remarkably effective. On the rocking axle, the upper 19t Pinion (right) is in constant mesh with the 95t Gear on the drive half-shaft with the lower 19t Pinion able to be thrown in and out of mesh with the 95t Gear: out of mesh, free running (as shown); in mesh (lever pushed forward), locked solid. On the other half-shaft, the rocking 19t Pinion would be arranged by the Coupling being above the shaft. This is proving wonderfully effective in my model and may find alternative uses in winding drum drives, etc.



Ken Ashton

Meccanuity 2016

Enginuity, 30th April to 2nd May

ne of the UK's major Meccano fixtures certainly survived the TIMS management change with models galore, many new and built for the two themes of Land Rovers and marking the club's 25th year. Public attendance was good, the visitors wanting somewhere to go on what could have passed for a winter weekend.



- 1. Left to right are **Les Nightingale Jnr**, **Tony Evanson** and **Alan Lovett**, all ready to go in the electric relay race; Les was destined to win and said "I'll have to extend my trophy cabinet!"
- 2. The winner of the Land Rover theme was **Gregg Worwood** with this model built to his now familiar and preferred combination of colour scheme and proportions.
- **3.** Maybe the largest model was this one of the Laxey water wheel which earned its keep by pumping water from the metal mines around Snae Fell on the Isle of Man. Built by **Colin Bull**, it netted him first place in the '25' theme by virtue of the real thing having er, 35 arches.
- **4. Tony Seed** continued to steer clear of mechanical models and finding peculiar subjects by having a go at the 'Voyager 1' space probe, launched in 1977. He admits to have taken some liberties with several details such as the dish support triangulation but who would notice? His main problem was Earth's gravity hence the base and shortened antenna off to the left.
- **5.** Down in the 'Gadgetdom' room was **Albert Howe** with this 1799 bell crank engine, originally modelled by Brian Rowe. The prototype machine currently resides in the Science Museum.
- **6.** A coracle is a traditional Welsh basic fishing boat made from willow and animal skin; **John Evans** made his from Meccano (of course!) and animated the carefully-paddling fisherman.
- **7.** Taking a break from fire appliances, **George Illingworth** joined in the Land Rover theme with this 1951 Series 1 open-topper modelled on a vehicle built for royal use.
- **8.** 'The Shy Couple' from **Chris Shute**. Press a button and he (on the left) gently jiggles his legs with excitement while their heads slowly turn to face each other before snapping back.
- 9. NEMS's Dave Dalton had fun with a succession of vehicles made to run on 'Scalextric' track.
- Most of them had steering too, including this vintage-looking lorry.

The pictures selected here show a tiny proportion of the models but serve to give a reasonable taste. While on about taste, fizz and cake was enjoyed on the Sunday to mark TIMS's 25th. Some attendees were *en route* to CAM at Calais so Meccanuity 2016 was reminiscent of NEMS at Bedale or Darlington!

A Meccanuity highlight is the contest, this time a relay race and the games had to be amended as a few more entries would have been useful. With youngsters drawn from the audience to send back the

entries, their lack of Meccano nous was exposed by them trying to force the models against their travel direction and twanged-off Driving Bands. Anyhow, the ever-persistent **Les Nightingale Jnr** arose victorious in the electric section and he later said "Every dog has its day"! The clockwork verged on



controversy when the leader ran out of puff before the finishing line then, in a breach of decent sportsmanship, was grabbed then hoiked over the line while the compere's attention was elsewhere and the other contender was still trundling. It's a good job it's only a game... *RM*















The Blackburn No. 2 Agricultural Engine

Another model of an unusual machine built, described and photographed by Ken Ashton



Introduction

This is the second of a series of models inspired by the outstanding engineering models featured in *Cherry's Model Engines* by David Carpenter and published by Robert Hale Limited. This prototype was the second design by the Blackburn brothers, Isaac and Robert, and patented in 1863 although it is unlikely it was ever built. It is a simpler version of the No. 1 Engine (see SMGJ125) and whilst maintaining the boiler, crankshaft and water pump within the narrower and now non-spoked nine-foot (2.74m) diameter wheel, the cylinders and regulator have been located onto the frame. A picture of Cherry's superb model is shown at Fig. 1.

Model

Like the model of the No. 1 engine, the scale has obviously been determined by the diameter of the Large Toothed Quadrants used for the rear wheel. The model incorporates representations of the boiler with water pump, the regulator on the water tank and the twin cylinders with operating reversing links. The front axle is steered from the footplate and reversing is effected via a DPDT switch. The model is powered by a Como 148:1 low-noise motor giving around 40 rpm. A Yuasa NP2-12V battery is housed under the footplate. This model is a radical redesign from that demonstrated at the Laughton SMG meeting in October 2014. The crankshaft has been moved back within the wheel and the drive utilises the outer teeth of the Quadrants. General views of the model are given in Figs. 2 & 3.



Frame

The sides are made up from an $18\frac{1}{2}$ " and a $3\frac{1}{2}$ " Angle Girder joined at the front end by a 12¹/2" Flat Girder, the latter also bolted to a 71/2" Angle Girder (Fig. 2). A 3" Angle Girder projects downwards at the rear and is braced by a 4¹/2" Strip. The sides are joined here by two 71/2" Angle Girders and a $7^{1/2}$ " channel girder (Fig. 3) and at the front by a 9¹/2" Strip, a 9¹/2" Angle Girder and a 9¹/2" Flat Girder. The footplate comprises two 5¹/2" x 3¹/2" Flat Plates (Fig. 4) bolstered underneath by a $5^{1/2}$ " x 2¹/₂" Flat Plate (Fig. 5). Behind these, two 2¹/₂" x 1¹/2" flat plates are bolted to the side frames and connected by a 51/2" x 21/2" Flat Plate which also carries a 41/2" x 21/2" Flat Plate flush with the front plates. Behind this, a 91/2" Strip is bolted to the frame. The footplate is extended outwards at each side by a 5¹/2" Strip carrying a 3" Flat Girder and 1¹/2" Corner Bracket bolted to the side frame. The frame is strengthened by two 9¹/2" Strips bolted to the side frames and these also act as a support for the battery.

Wheel and supports

The wheel comprises six Flanged Rings, two sandwiching four central Large Toothed Quadrants and the other four spaced out on four rods giving an overall wheel width of exactly 5". The Rings are held in place by Collars and, on the smokebox side, by bolting the outer Ring to four Threaded Couplings. Ribbed rubber sheet is wrapped round each half of the wheel until just proud of the external gear teeth but leaving a central gap of around 1/4" to ultimately accommodate a 16t Large Toothed Pinion (Fig. 6). The wheel is located on four roller carriers attached to the frame. The front rollers consist of 1" loose Pulleys with two Wheel Discs free to rotate on a short Pivot Bolt attached to a Flat Trunnion. A dummy spring is provided by a Compression Spring on a long Bolt held in an Angle Bracket (Fig. 3). The rear rollers comprise 1¹/₈" Flanged Wheels and Wheel Discs on standard Pivot Bolts, the latter secured to Flat Trunnions and the dummy spring. The Flat Trunnions are spaced from and bolted to a 71/2" Angle Girder attached to a 7¹/2" Flat Girder bolted to each side frame noting that the inner holes of the Trunnions are left free for the rods supporting the boiler (Figs. 7 & 8).

Boiler

The boiler consists of two Circular Girders separated by curved peripheral $5^{1/2}$ " x $2^{1/2}$ " and overlapping $5^{1/2}$ " x $1^{1/2}$ " Flexible Plates, i.e. $3^{1/2}$ "



width. A 6" Circular Plate is bolted to one Circular Girder and has the firing doors represented by two Wheel Discs with Collars and an ash access door provided by a 11/2" Flat Girder with Hinge (Figs. 2 & 8). The smokebox consists of two 2¹/2" x 2¹/2" Triangular Flexible Plates bent over and attached to a top plate, a $2^{1/2}$ " x $2^{1/2}$ " x $1^{11}/_{16}$ " Curved Plate. Two 2" Angle Girders bolted to the Triangular Flexible Plates support the sloping front. This consists of a 31/2" Flat Girder and a 31/2" x 11/2" flat plate carrying a 3" Stepped Curved Strip. An inspection door is represented by a 2" Flat Girder, two Hinges and a Collar with long Bolt. The Curved Plate carries a Coupling to accommodate the exhaust pipes and has an extra hole drilled to accommodate a short vertical Rod held tightly by a Collar below and a 11/8" Flanged Wheel above. A short length of black tube is held in place by a Bolt through another 11/8" Flanged Wheel and locating in a Threaded Coupling inside the chimney. A steam dome is three Wheel Discs and a 1/2" Pulley (Fig. 2). The smokebox is held in place by a central Bolt in a 1/2" square collar acting as a captive nut and bolted to the top hole of the Circular Plate. It is prevented from turning by $5^{1/2}$ and $4^{1/2}$. Strips fixed to a 41/2" Angle Girder across the Circular Plate and butted up against the smokebox. Two 1/2" Pulleys on Pivot Bolts, representing gauges, are fixed in the end holes of the 5¹/₂" Strips. This end of the boiler is completed by bolting a Crank inside the Circular Plate. The Crank carries a long Rod, two holes up from the centre line, which allows the other end plate and inspection chamber to be ultimately secured by a Collar (Fig. 3).

The other side of the boiler is a 6" Circular Plate with a Sleeve Piece and two 3/4" Flanged Wheels bolted at a slight angle to represent the water pump. At this stage, if the sideframe on the smokebox side is removed, the boiler can be placed within the wheel and the sideframe reattached. Two long rods passed through the free Trunnion holes are fitted with Collars and passed through the holes in the boiler end plate and pass through the other Circular Girder allowing the Circular Plate to locate tightly against it. The long Rods are fitted with further Collars and then pass through the Trunnions on the other sideframe. Once positioned centrally, the Collars alongside the boiler and outside the frames can be firmly fixed (Figs. 3, 7 & 8).

The boiler is completed by the inspection chamber consisting of a $3^{1/2}$ " x $2^{1/2}$ " flat plate with $2^{1/2}$ " girder brackets forming the sides. Top and bottom are provided by $3^{1/2}$ " Flat Girders attached by $1^{1/2}$ " Angle Girders (Fig. 7). Dummy doors are provided by two $2^{1/2}$ " Flat Girders with Hinges and Collars with Bolts. Two long Collars represent safety valves and the whole is slotted onto the end of the long Rod and fixed tightly in place by a Collar.

Crankshaft and cylinders

On each sideframe, a 1¹/2" Angle Girder carries a 1¹/2" Flat Girder and a 1¹/2" Strip. Butted against the 1¹/2" Strip on the inside of the Flat Girder is a 2" Slotted Strip which carries the crankshaft Rod through the wheel (Fig. 6). At its centre, this Rod carries an 8t large-toothed pinion and proper

meshing with the Quadrants is effected by adjustment of the Slotted Strips before finally tightening the Bolt holding each Slotted Strip. The crankshaft also carries a Single Eccentric inside the frame for water pump operation via a short Rod with Collar (Fig. 3). Outside the frame, two Single Eccentrics and a Bush Wheel are fixed on each side.

Cylinders each consist of two $1\frac{1}{2}$ " x $1\frac{1}{2}$ " Flanged Plates bolted to the footplate with two $1\frac{1}{2}$ " x $1\frac{1}{2}$ " Flat Plates as spacing. Four Wheel Discs are bolted inside and outside the Flanged Plates. The top is a $1\frac{1}{2}$ " x $1\frac{1}{2}$ " Flat Plate extended by a curved $2\frac{1}{2}$ " x $1\frac{1}{2}$ " Flexible Plate. Two Threaded Bosses attach to



the top plate and two Collars with Bolts are bolted onto the Curved Plate. A crosshead slide is given by a Rod through the top hole of the Wheel Discs and held in place by Collars. The valve rod carries a Strip Coupling and is prevented from turning by a Coupling fixed to the rod but sliding along a short Rod held in place by Collars within the cylinder (Figs. 2, 3 & 4).

On each side, the inner Single Eccentric is bolted to a 5¹/2" Narrow Strip, slightly cranked outwards and lock-nutted to a 1¹/2" Narrow Strip with slotted centre hole (Figs. 2 & 3). The outer Single Eccentric also carries a 5¹/2" Narrow Strip which has a ³/4" Bolt extending through the bottom hole of the 1¹/2" slotted narrow strip. The Bolt carries a loose 1¹/2" Narrow Strip which extends upwards and rocks

on a Bolt fixed in a Short Coupling (Fig. 4). Each Short Coupling is attached to a long Rod journalled in Trunnions spaced from the footplate by long Collars. The rod carries a Coupling with a 2" Narrow Strip loose on a Pivot Bolt and extending forward to the control lever. The lever is attached by a non-standard coupling loose on a short Rod fixed in Collars loose on Bolt shanks on the footplate. The coupling accommodates the 2" Narrow Strip by a long Bolt in its upper threaded hole (at 90° to that on a standard Coupling). The lever is a short Rod with a Short Coupling and Threaded Pin representing the ratchet control. A quadrant is made from two 21/2" Stepped Curved Strips spaced with Washers and bolted to two 1" x ¹/₂" Angle Brackets fixed to the footplate (Fig. 4).

The Bush Wheels are fitted with a Bolt as the crank pin carrying a Rod & Strip Connector and a long Rod with a small Fork Piece carrying a Coupling as the crosshead. The inner arm of the fork locates on a Grub Screw in the Coupling to avoid fouling the valve rod. The crank pins are, of course, set at 90° to each other.

Front wheels and steering

The front axle is supported in a $2^{1/2}$ " x $1^{1/2}$ " Double Angle Strip attached to a 95t Gear (Fig. 5). The wheels comprise six Spoked Wheels, rubber wrapped to give three wheels loose on the Rod and held in place by Collars. The Gear carries a short Rod which is spaced from the underside of the footplate to provide a level frame and is held in place with a Collar. The Gear meshes with an offset 25t Pinion on a short Rod with a 60t Gear above



the footplate. This gear in turn meshes with a 15t Pinion on the steering shaft. A raised footplate area provides journals for the vertical rods and comprises a $4^{1/2}$ " x $2^{1/2}$ " Flat Plate with $4^{1/2}$ " Strip attached to two 3" Angle Girders and spaced by long collars on 3^{4} " Bolts (Figs. 2 & 4). Two $4^{1/2}$ " Angle Girders complete the front and back of the raised area.

The steering shaft is supported in a $2^{1/2}$ " sleeve piece with two Chimney Adaptors. The sleeve piece is held in position by a long Bolt which enters its bottom hole, being screwed through the transverse hole of a Threaded Boss bolted to the raised footplate two holes distant. The capstan wheel comprises a $5^{1/2}$ " and a $4^{1/2}$ " Narrow Strip curved to form a circle and bolted together. Six short rods are pushed through the Narrow Strips into two Triple Rod Connectors, one bossed. The handrails can now be fitted as shown in Fig. 4.

Motor drive

A Channel Bearing is bolted to the footplate rear with a 1½? Strip as a spacer below (Fig. 6). A short Rod with a 50t Gear and a 14t Sprocket carries a Chain drive to another 14t Sprocket on a long Rod journalled in two 1½? Strips bolted to the sideframes. A 16t Large Toothed Pinion is fixed centrally to allow engagement with the outer teeth of the Quadrants and two Collars hold the rod in place. The 50t Gear is driven by a narrow 25t Pinion on a short Rod also carrying a 38t Gear. The motor can then be bolted to spacers (around 1") to allow optimum meshing of the 25t Pinion on the motor shaft. Below the motor a DPDT switch is bolted through a 1¹/2" Angle Girder and carries a short glued-on tube with two Collars sandwiching a 2¹/2" Narrow Strip. This extends forward to a Pivot Bolt in a Coupling on the long reversing shaft. At this point and with the motor connected to a power source, the Short Couplings on the ends of this Rod can be adjusted to raise or lower the reversing links in conjunction with the motor reversing and the lever movement within the quadrant.

Water tank, coal scuttle, toolbox and brake

The water tank comprises corners of 31/2" Angle Girders joined by 51/2" x 21/2" Flexible Plates front and back. The front plate is extended downwards by two 21/2" x 11/2" Flexible Plates. The sides are made from a 3¹/2" x 2¹/2" and a 2¹/2" x 2¹/2" Flexible Plate, the latter accommodating the Channel Bearing. The top is made from a 3¹/2" x 2¹/2" and a 2¹/2" x 2¹/2" Flexible Plate bolted to 5¹/2" Angle Girders front and back. Two 11/2" Angle Girders, one with a ¹/₂" Pulley as the filler cap, complete the tank (Figs. 2, 3 & 4). Two 1" x ¹/2" Angle Brackets fasten the tank to the footplate. A regulator is represented by a Sleeve Piece with two 3/4" Flanged Wheels bolted to a 1" Angle Girder spaced from the top plate. A dummy regulator handle is provided by a short Rod with Collar in a Rod & Strip Connector held in place by a Collar and spring on a short Rod in the Flanged Wheel. The Sleeve Piece also carries three Threaded Pins and a Short Threaded Coupling with Collar representing the whistle with a Collar and long Bolt attached as the lever (Fig. 2). The steam pipes, made from flexible curtain rail, can now be connected from the steam dome to the regulator and the regulator to the cylinders. Similarly the exhaust pipes from cylinders to the Coupling on the smokebox. A water supply pipe (curtain rail with thick washers) connects the water pump to a valve on the water tank provided by a Threaded Coupling with a long Bolt on a Collar acting as the tap lever (Figs. 3 & 7).



Two 9¹/2" Angle Girders provide the support for the coal scuttle. This comprises a 2¹/2" x 1¹/2" Flanged Plate and a 2¹/2" x 1¹/2" Double Angle Strip supporting the sides, 21/2" x 11/2" Triangular Flexible Plates and the base, a 21/2" x 21/2" Flexible Plate and 21/2" Angle Girder (Fig. 5). The toolbox sides are made up of two overlapping 2¹/₂" x 1¹/₂" Flexible Plates and two 31/2" Angle Girders supporting the base, a 3¹/2" x 2¹/2" Flexible Plate. The back is a 21/2" Flat Girder bolted to a 11/2" Angle Girder attached to the base. The toolbox door is a 21/2" x 11/2" Flexible Plate and two 11/2" Strips attached by Hinges to the sideframe. The toolbox acts as the access for a plugged terminal block connecting the battery to the motor. This can be split to allow external battery charging without battery removal. Footstands are provided for boiler access comprising of 31/2" Flat Girders with two long Threaded Pins connected via Rod Connectors to short Rods passing through the sideframe and held in place by Collars (Figs. 2 & 7). A similar footstand is provided at the rear for scarifier operation (Fig. 3).

The brake is mounted on a $1^{1/2}$ " Flat Girder bolted to the sideframe. The brake shaft is a short Rod with Crank and Angle Bracket that can bear against the inside of the wheel rim. Outside the frame, the Rod carries a narrow 19t Pinion operated by a short worm on a Rod mounted in a $1^{1/2}$ " x $1^{1/2}$ " Double Angle Strip controlled by a small handwheel (Fig. 2).

Power take-off and scarifier

This is an optional extra! The PTO rod is journalled in two 11/2" Angle Girders spaced from each sideframe to give correct mesh of an 8t large tooth pinion with the internal teeth of the Quadrants. Once correctly spaced the rod is held in place by Collars (Figs. 7 & 8). The 8t pinion is fixed along with a Dog Clutch half in a Socket Coupling, loose on the shaft, and is held in mesh by a Coupling carrying two short Rods engaging the Socket Coupling. The coupling is fixed to a Rod which is fixed in a Double Arm Crank bolted to the 1¹/2" Angle Girder which also carries a 1¹/2" Flat Girder (Fig. 7). Two 1" Triangular Plates are spaced from the Flat Girder and carry a sliding Rod and fixed Collar which is controlled by a Bolt in a 2" Narrow Strip lock-nutted to a further 1" Triangular Plate. The latter is attached by an Angle Bracket and a Bolt which enters the boss of the Double Arm Crank. The sliding Rod has a Short Coupling fixed at its inner end and this carries a short Rod which engages with a second Socket Coupling on the PTO shaft. This has a fixed Dog Clutch half and can slide along the shaft on the boss of a Collar which is fixed to the shaft with a long Grub Screw. Moving the lever inwards engages the Dog Clutch

and provides drive from the 8t large-tooth pinion to both Socket Couplings and hence the PTO shaft. An 18t Sprocket provides Chain drive to the scarifier (Fig. 8).

Each side of the scarifier comprises two 4¹/₂" Angle Girders connected by a 2¹/₂" x 1¹/2" flat plate and two Wheel Discs. The sides are connected by two 5¹/2" Flat Girders. This arrangement pivots on a long Rod journalled in a 2¹/₂" x 1¹/₂" Double Angle Strip fixed to the rear frame (Fig. 3). Each side of the support consists of a $1\frac{1}{2}$ Angle Girder carrying a 3" Stepped, a 21/2" Curved Strip and an Obtuse Corner Bracket (Fig. 8). The 11/2" Angle Girders are attached to a 71/2" Girder Bracket bolted to the rear frame. The Curved Strips are attached to four Wheel Discs which provides the journals for a Rod held in place by a Collar and a 38t Gear. Two 25t Pinions are sandwiched between two 11/2"

Narrow Strips which carry plastic Spacers to accommodate two 3¹/2" Rack Strips. These are pivoted on short Rods held by Collars in 1¹/2" Narrow Strips attached to two Trunnions bolted to the scarifier frame. Two long Bolts in the Wheel Discs and through the outer 1¹/2" Narrow strip bear against the Rack Strips preventing disengagement. The 38t Gear is operated by a short worm on a rod journalled in two Collars loose on bolt shanks fixed to the middle hole of the 2¹/2" Curved Strip and the slotted hole of the 3" Curved Strip. The worm rod is held in place by a Collar and a Double Arm Crank with handles comprising two Threaded Pins.

The scarifier itself comprises six 11/8" Flanged Wheels with additional threaded holes to allow four long Bolts to affix to a long Rod. A central set of tines is carried on a four-hole Collar sandwiched by two Wheel Discs. The Rod is Chain-driven via two 14t Sprockets and a second Chain drive connects a 14t Sprocket on the scarifier to an 18t Sprocket on the PTO shaft. An additional 18t Sprocket loose on a Pivot Bolt acts as the chain tensioner.



Construction notes

This model went together surprisingly easily. Since the crankshaft is driven by the internal gear teeth, the piston and reversing gear motions must be absolutely free running, as also must be the PTO for the scarifier. The model steered well despite the width of the wheel. Cherry Hill's models are well worth reproducing and most have very unusual characteristics: the book is highly recommended.

Ken Ashton

Coming up in SMGJ127 The Gellerat steamroller



La SMG Traversée la Manche

Colourful CAM 1: theme models, la traversée de la Manche

- 1. Crossing the English Channel isn't always plain sailing. **Marcel Rebischung's** spectacular offering was a tug hauling a stricken vessel through a churning sea with appropriate sound effects. The overall result was so realistic it made Wendy Miller feel slightly nauseous!
- **2.** The theme inspired **Francis Hamon** to depict the tunnel excavation from the cutting face with spoil removal and, in its wake, concrete segments lining the bore. These were fed by crane just visible in the background; Francis chose to omit the complicated final segment handling...
- 3. Jean Claude Jonnet tackled a multi-deck tunnel cross-section of an aborted 1939-45 scheme.
- **4.** A 'Naviplane' hovercraft modelled to ¹/₅₀ scale by **Maurice Roussel**. Two of these 50m x 23m, five-turbine machines operated the Channel crossings from Boulogne on behalf of SNCF as a rival to BR's 'Hoverspeed' from 1978 to 1985 which was a very short service life.
- **5.** Holding up the SMG end in the face of cunning continental competition was a rack loco from **Russ Carr** and one of only two *Traversée de la Manche* model from the UK; John Evans's coracle, page 37 was the other after one was paddled across in 1974. At first sight, the link with the theme appeared tenuous but a fleet of eighteen of these locos, both rack and adhesion types, were built by the Hunslet Engine Co in Leeds to haul waste rock from behind the 'moles' to the surface. Russ rebuilt this model within a month from a handful of early 1990s photos.
- **6.** A whimsical model from **Philippe Baudeau** was based on a 1960 French cartoon series. Two alien races (Shadoks et Gibis, short for GBs), each based on a couple of Semicircular Plates with googly eyes, had built their own tunnels, one below and one *over* and due to an alienesque surveying error, they met at a slight angle. Being set in front of a large window at Forum Gambetta made the model tricky to photograph so here's just the entry end where each race is fed in to a knowledge-boosting hopper. Have a look at page 56 for a more satisfactory picture.
- 7. Unsurprisingly, Blériot's 1909 flight over *la Manche* proved popular and an original take had to be this one over choppy waters between cliffs of Calais and Douvres by **Jacques Chaminade**.
- **8.** Your Ed knows from his model railway days that dereliction is very hard to represent. Here, the reason for **Marcel's** vessel in distress is revealed, complete with orange 'fire' and smoke generator. Either that or he has been buying some of the better parts from LMS...

5^{eme} à 8^{eme} Mai 2016; texte et photos par Russ Carr et Rob Mitchell

ell, we made it without any casualties or the gendarmerie raising an eyebrow while driving on the wrong side of the road from the tunnel terminal to Forum Gambetta in central Calais where CAM held their 43rd annual exposition. Even





our models, all twelve of them, worked when set up then a touch of attention. As Calais is closer to the UK than most of France, there was a strong presence from these shores *avec* or *sans* models.

many of whom were SMG members. Despite some empty tables and a sparse public attendance, it was nevertheless an excellent opportunity to catch up with our European counterparts and admire their abilities. This applied in

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Colourful CAM 2: a further selection

- "Be prepared for a quite different approach to Meccano" was the advice offered to Russ during 9. the outward journey. This model epitomises the difference, Jean-François Nauroy's version of Auguste Rodin's Les Bourgeois de Calais, a 1.5t bronze artwork outside the Calais Town Hall. The statue on the right carries a Screwdriver; his prototype carries a large bent key, picture 15!
- 10. Pierre Monsallut's skeletal Renault four-wheel drive 1000 kg van.
- 11. CAM's President Bernard Guittard presented this guarter-scale 1966 Citroën 2CV.
- 12. A twin-dial drum clock was one of three timepieces by CAM's retired President, Claude Gobez.
- 13. The machine that inspired the SML Dragline receives the Jean-Pierre Veyet treatment. He also had a 'County' 'Sea Horse' tractor on 6" wheels and with a sixteen-speed gearbox! The original was built to cross the Channel as a publicity stunt.
- 14. Guiseppe Chiambretto and Max Ferranti formed the Italian contingent.
- 15. The prototype of Jean-François's model.
- 16. One of a pair of calculating machines built by Max was this Pascaline for adding large multipledigit numbers and invented by Blaise Pascal, of pressure unit fame, in 1645.
- 17. Among the antique nickel models, many of modern subjects, was this overly skinny and lopeared Dachshund by Switzerland's Thomas Rothenhäusler.
- 18. Guy Kind's Pilatus Railway model featured a form of pointwork whereby the whole unit rotated. The 'rack' is the centre rail with short Axle Rod 'teeth' engaged by six-hole Bush Wheels.

particular to Michel Bréal after last year's illness which kept him from Skegex 2015.

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The Brits did very well in the prizes which could mean CAM organise their 44th Exposition at a much greater distance from the UK! For the theme, first

prize was awarded Philippe Baudeau with his 'Shadok & Gibis' tunnels with second to Marcel Rebischung for his powerless vessel & tug. In the

picture choice here focuses on some models

general category, Stuart

Weightman's precision

industrial robot took top

honours and second went to Michael Molden's

huge, LED-festooned 'Jet

Due to limited space, the

Force' fairground ride.

for the crossing the Channel theme, those not likely to be seen beyond France and others that simply caught our eye. RC & RM





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The Early Years of the 142b... and Before

Using his industry knowledge and some imagination, John Learman ponders the potential origin of the first Meccano Tyres

Part 6: 1929 to 1936 The Michelin 142s - More Family Additions - The First Meccano 142s

In Part 5 we looked in detail at perhaps Dunlop Marketing's most duplicitous scheme in which it had planned to duplicate Frank Hornby's efforts and use Lines Bros to distribute its 142s alongside Meccano without a moment's thought for Frank's sensitivities. It certainly appears that the common forms of both decency and reason were pointedly rejected throughout this shameful project that

probably had Frank incandescent with rage and understandably foaming at the mouth for revenge. We saw that he lashed out as much as he could with Walter Lines feeling his spiteful wrath most acutely when Frank cancelled Walter's full page *MM* adverts that were supposed to launch his new 'Fairycycle' bicycles in time to catch the 1927 Christmas season. This wasn't to be the end of the affair but though I was hoping to cover it this time lack of space now means it'll have to wait til Part 7. In the meantime we have the launch of the smaller 142s to examine but as we've so often found before some things are not always as straightforward as we might have expected... so now read on.

Although I had been hoping to leave this LB 142a business far behind us for now, it seems there was to be a silver lining to this particularly black cloud. Unfortunately in the aftermath this wasn't to be immediately obvious to any of the parties at the time but there is a strong case suggesting that it was this very episode that set the scene for the birth of the two junior Meccano 142s - and this time it didn't have anything at all to do with the Lines Brothers or Dunlop or even Meccano.

I do have some sympathy for Frank Hornby in that he was most certainly a victim of DMD's scheming but in his anger he lashed out instinctively at both DMD and Walter. The former didn't seem to feel the sting at first and just kept sending him tyres while the latter had some fancy London lawyers ready to drag Frank through the Civil Courts for breach of contract. As I've said we'll be looking more deeply into this LB matter at a later date but for now we must focus our attention on the special 'arrangement' that linked Frank Hornby and Dunlop Marketing together in a very tight



relationship that was almost symbiotic in nature. I use the term to mean two dissimilar creatures that normally work harmoniously together for the mutual benefit of both. Of course problems can arise when one of them refuses to do its fair share of the work and this is precisely what happened when Frank imposed a complete blanket ban on mentioning or depicting Dunlop's new true-form 142s in any of his Meccano publications from late 1927 onwards in retaliation for the LB debacle.

Now I don't doubt that both parties had signed some sort of contract to codify their 'arrangement' but since they both wanted to keep it well hidden from public view then neither would ever allow it to be opened up for scrutiny in any Court of Law. So with no possibility of legal redress there was little that DMD could do to force Frank to comply with his obligation to publicise his new true-form Tyres. Obviously there were no problems as 1927 began but their relationship would be practically turned on its head due to several decisions taken by late autumn. The primary setback for Dunlop Marketing was that when it proposed expanding its original 142 campaign into the Dunlop Family of Tyres project it actually lost ownership of this new programme. After approval, Sir Eric Geddes and his Board allocated sufficient funds to bring it to fruition while Dunlop's own sales department would deal with Lines Bros, effectively side-lining DMD which would henceforth be responsible for supplying 142s only to Binns Road here in the UK. You must remember that at the same meeting the Board had also approved expanding the Meccano 142 Tyres campaign overseas to now include both France and America - both of them guaranteed to be well outside Marketing's sphere of influence. I don't know what aspirations DMD may have had

when it took its proposals to the Board but I don't believe it could have ever expected to come out of the meeting so impoverished compared to how it was before it went in. The original 142 campaign may have been small and limited in scope but at least DMD owned every bit of it whereas now its role would be limited to merely acting as an agent for the Board to oversee the very same campaign but without any executive power to govern it.

IS THIS A REAL CAR?



Our readers might well be excused for mistaking the car depicted in the illustration for a real one. Actually it is an exceedingly well proportioned model of a Packard roadster. It will be of particular interest to Meccano boys because Meccano Dunlon Tyres, Pulleys and Axle Rods have been utilised in its construction. The builder of the model, Mr. E. Barrow-Sicree, has endeavoured to include as much external detail as possible, and how far he has succeeded in this direction is shown by the fact that ignition, throttle and light controls are fitted to the steering column, while even the electric windscreen wiper has a small switch attached to it !

reckon he would have felt threatened far more by any kind of exposure to Sir Eric and his Board.

From his humble tradesman's beginnings it seems that Frank had always striven hard to improve his lot in life and when required it appears he wasn't averse to a fair degree of self publicity and

Of course the Board's decision would have greatly affected DMD's 142 team. Now I can't prove it but I strongly suspect that it was this curtailment of responsibility that made some in the team begin to think seriously of resurrecting an earlier proposal to use Lines Bros as a secondary tyre distributor. I don't believe it ever had a chance of working but at the time they probably thought that they could justify their positions in the company by achieving such an unlikely goal. I know that it's no excuse but perhaps it was their desperate need to succeed that persuaded them to flout standard protocols and ignore good business ethics and so doomed their ill-fated venture to its inevitable failure with Walter Lines first sending them packing only to be followed soon after by a fulminating Frank Hornby promising all kinds of retribution down the phone line from Liverpool.

Quite naturally DMD management went into full damage limitation mode to try and placate both toy tycoons in an effort to ensure that news of the crisis would never reach the ears of the Board and so precipitate a very painful enquiry. I'm sure that nobody in Marketing would have ever wanted to go before Sir Eric to explain exactly how they'd upset both Walter Lines and Frank Hornby in the very

same ill-advised project with the probability that, under close scrutiny, they might well have been forced to disclose secret details of DMD's 'arrangement' with Meccano. This scenario would have been a nightmare for some Marketeers as it could have ended their careers which would have been a frightening prospect with the UK economy already on its knees. Of course for his part Frank Hornby would not have needed to worry about any such financial crisis but for very different reasons I

perhaps even inventing it wherever necessary. So after many years he had acquired a carefully constructed reputation and image for himself as a most respectable man of substance and a trustworthy pillar of society. Unfortunately some in Dunlop Marketing would have been able to testify to a totally different side to Frank's persona when he agreed to sell out his entire worldwide customer base and set them all up as innocent targets for DMD's 142 publicity campaign and all for a measly amount of cash. Such an apparent willingness to exploit the eager demand for his new Meccano tyres by many tens of thousands of youngsters would have clashed shamefully with his self-styled image as a kindly 'Uncle Frank' delivering good tidings to his loyal Meccano followers. Such a defamatory statement showing him as a 20th Century Fagin, uncaring of his charges and driven by pure greed, would have been the most damning indictment that Dunlop's Marketeers could have levelled at Frank in order to deflect any major criticism from themselves.

maybe bending the truth where it suited him or

Now I know that Frank was never as saintly as he'd tried to paint himself. He could be devious, selfish, spiteful and quite mercenary but I am absolutely



certain that he'd never deliberately commit such a heinous act of betrayal as depicted above. It must be remembered that he was just a businessman who saw a chance to save himself some expenses when DMD offered him the 'arrangement'. At the outset all he'd wanted was a supply

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of very cheap tyres which could reap him a fair profit - nothing wrong with that was there? With DMD he'd have the sole distribution rights (or so he thought) and by providing such a global service he'd be

earning totally legitimate fees. So there was nothing wrong with this either and when he sold his 142s to any of his customers, of whatever age, again he never did anything ethically wrong or morally questionable. In fact from Frank's perspective, I think it's likely that he may have thought that rather than taking advantage of his buyer's trusting instincts the boot was most definitely on the other foot as it was they who benefited most when they took advantage of Marketing's generous offerings. I reckon he knew that they weren't as gullible or naïve as DMD may have expected and were very capable of spotting a good deal whenever it was offered to them.

It's a fact that Frank liked to make money but I'm quite certain that his small profits and those fees from DMD would have mattered very little to him compared to the thrill of finally delivering his new 142s to his customers - and his biggest thrill of all would have been when he was first invited to join the campaign and go into partnership with one of the British Empire's most prestigious companies. This must have been a very happy time for Frank, undertaking a truly vital role in a joint enterprise with Dunlop, all under the watchful eye of Sir Eric Geddes and his Board. For this one time he could actually boast guite truthfully to his friends about his favoured relationship with such a major British

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famous Dunlop Cord Tyrés. They may be obtained from any Meccano dealer. "Fit Dun-lop and be satis-fied!"

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famous

company. Sadly it was too good to last and though he may have thought that all was above board his first indication that maybe something wasn't quite right was when DMD insisted that its own role in its very own campaign must remain confidential. Now Frank Hornby wasn't going to be anybody's fool and despite his initial euphoria I believe that he quickly realised to his horror that he was in an extremely vulnerable position that threatened his wellbeing, both personally and professionally.

Apparently dazzled by his imagined good fortune, he simply hadn't noticed how, whether by design or by



chance, he'd effectively been set up to act as the 'fall guy' for the whole campaign if anything were to ever go wrong with it. To a great extent Frank's earlier efforts to promote himself as some sort of

ever watchful shepherd guarding his flock of young Meccano enthusiasts only increased the danger of his predicament. Now Frank's personal drive for self-improvement during his formative years has been highlighted by previous authors and I'm sure that he was much persuaded by the words of Robert Baden-Powell who pioneered the Boy Scout Movement and published a moral code for the young in his handbook Scouting For Boys early in the century. A decade later and after war's end Frank wanted to elevate Meccano from being just a toy and promote it as a global hobby with a truly international following and I'm convinced that he saw in Baden-Powell's Scout organisation the ideal template upon which to base his own endeavours. Of course I can never prove it but I suspect that, when first launched, the Meccano Guild with its structured membership and dedicated clubs was deliberately organised to mirror Baden-Powell's Scout Movement. Its ethos also appeared to be almost identical to that found in Scouting For Boys with its emphasis on a code of behaviour based on the long established values of honesty, loyalty, diligence, self-reliance and cleanliness. Any middle income parents, themselves brought up in the ways of the boy scouts or girl guides, would have been more than happy to see that the Meccano Guild was continuing to promote such commendable ideals to their children all under

the protective hand of Frank Hornby at its helm. By 1927 Fig. 6.5 the Guild membership numbered many tens of thousands of youngsters from Any boy can build a perfect working model of a motor car with Meccano. All the intricate mechanisms of the car can be reproduced, and a final realistic touch given to the model by fitting the wheels with across the British Empire and I'm sure that each and every one of them had implicit faith Meccano Dunlop Tyres These parts are obtainable in four different sizes, as follows :-in Frank Hornby as the trusted President of the Price each ... 4¹/₂d. ... 6d. ... 3d. ... 4d. Guild. Perhaps at first he The tyres are specially made for Meccano Limited by the Dunlop Rubber Co. Ltd., and are perfect miniature reprodidn't appreciate how much influence he could exert over so many receptive young minds but I'm sure that after he'd signed up with DMD he suddenly realized what a tremendous burden he now carried and the catastrophic potential for disaster that it represented for him personally.

Frank's newly discovered dilemma was that as head of the Guild he had an undeniable duty of care for every member but in order to supply them all with 142 Tyres he had to effectively suspend his pastoral care and allow DMD free access to use them all as test subjects for its purely commercial campaign. Now nothing would have inflamed the passions of the rich and the righteous as much as when their children were being threatened or abused and it would have been utterly impossible for Frank to deny

his responsibility in allowing the Marketing campaign to proceed. As I said earlier, I'm sure that Frank thought he was doing nothing wrong at the outset but he was smart enough to see that his actions could be interpreted in different ways and could be massively misrepresented by those who might want to challenge or condemn him. So if he still wanted to supply his members with new 142s then I don't think that Frank had any option but to comply with DMD's request to keep the details of the campaign and the 'arrangement' totally under cover for the sake of all parties concerned. If such had ever come to light then it would have been Frank who would have been denounced from every pulpit in the land with maybe even a few effigies of himself stuck up on poles around the country just like Guy Fawkes on Bonfire Night.

DMD's part would have barely raised an eyebrow as Frank's culpability would have seemed obvious to everyone and even he would have seem that he had no chance of survival. So if the world's greatest toy maker and self-proclaimed Father of Meccano was to have ever been accused of betraying the sacred trust of the Empire's youth it would have resulted in a scandal of monstrous proportions.

Frank had literally taken the Devil's shilling and now he must live with it so at a time when he was keen to cultivate friends in high places in support

of his future political ambitions he'd do anything and everything to keep his 'arrangement' from being exposed to the general public and Dunlop's Board in particular. The very thought of Sir Eric Geddes mulling over his dubious dealings would have given him nightmares as Sir Eric was a very influential member of the British Establishment who had it in his power to utterly destroy Frank's political ambitions



with a simple telegram to the 1922 Committee or a quiet word with his Carlton Club friends in Pall Mall. To ensure his continued survival Frank kept his head down but his peace was shattered when LB's 142a suddenly surfaced. Even now I'm still amazed that in his murderous rage against DMD, Frank was still able to think clearly enough for his self-preservation instinct to kick in and restrict his polemic vitriol so that none of it ever reached the ears of the Board.

Despite the acrimony, a tacit understanding to ensure their continued survival appears to have evolved between both Frank and DMD whereby each would carry on as if nothing had happened and that way nobody would get hurt. As neither could injure the other without causing their own self destruction then they'd both keep very quiet. We can be absolutely sure that the Board never suspected a thing because if it had then Sir Eric would have quickly shut down the 142 campaign to forestall any damage to Dunlop and he'd have blackballed Frank in an instant. He would never have become an MP and the Duke of York would never have toured Binns Road in May 1930. Of course if rumours of the campaign were ever to have been leaked thereby threatening a scandal then Sir Eric would have simply thrown Frank to the wolves since he wouldn't ever try to suppress the unsuppressible and his overriding priority was

to protect DRC's good name if possible. Poor Frank, with his reputation in tatters his fall would have been absolute and he'd have been shunned by polite society with possibly many from the lower orders who'd been envious of his success also joining in the feeding frenzy to bring him down. I'm glad to say the above never happened as those with most to lose behaved themselves, the mutual pact of silence held, 142 production increased and Binns Road just kept shipping them all out.



For DMD members whose folly brought on the LB 142a affair the future was grim but it's likely that most were relocated within the department with



maybe just one or two unlucky individuals facing dismissal due to the contraction forced on Marketing by the Board's decision to prune their 142 plans earlier in the year. The 142 campaign itself was an ongoing programme that just kept running on autopilot without any intervention since nobody in DMD now had the authority to cancel it. It required little attention apart from placing batch orders as requested by Binns Road and paying the bills on time. Such a small effort probably needed only a couple of hours a month and I imagine that it would have been entrusted to a junior member of staff whose only real task was to append a summation to the department's annual report for the Board.

So in the aftermath of the LB 142a, to all intents and purposes, DMD management and staff had effectively finished with their own 142 campaign. It appears that nobody cared any more and apart from a tiny outlay of cash and an insignificant effort by the office junior, everybody simply got on with far more important things. What's very ironic is that Frank wasted so much of his energy to absolutely no effect when he ordered his *MM* staff to expend all their efforts to comply with his blanket ban as in essence they played to an empty theatre with a non-existent audience. I'm certain that no one in DMD noticed the insulting calliper photo or any of the carefully retouched readers' photos that were published during the blackout.

The unforeseen problem that Binns Road staff encountered during Frank's ban was that as the true-form tyres continued to be shipped out in much greater numbers then they featured more and more often in reader's photos. Even those enthusiasts with duralumin 142s would prefer to use the far better looking true-form tyres when it came to displaying their finished models. From the

blackout period I've found some half dozen photos I'm sure have been retouched to hide their use of trueforms and **Figs. 6.1** & **6.2** show the best two examples of such editing. The first is a saloon car by Mr R Allum that appeared on page 758 of the *MM* for September 1928 and the



other, a Packard Roadster by Mr E Barrow-Sicree, was published on page 158, February 1929. The tyres on the saloon have all had their sidewalls washed with grey up to the crown to hide their true-form sidewall treads and the Packard's tyres have been

similarly treated. I'm sorry if they haven't come out very well but if you study the originals you'll notice that they've both been deliberately reduced in size and purposefully 'fudged' a little I suspect.

Frank's ban required reader's photos to comply with extra levels of inspection before they could be considered for publication. In addition to the usual criteria, if true-forms were involved then could the photos be easily retouched or would yet more great photos fall foul of Frank's ban? As the true-form numbers swelled such restrictive practices caused ever greater problems for the MM staff and despite their desperate calls for a change in policy it was well into the second year before Frank finally agreed to overturn his ban to allow the new tyres to appear in the MM and other Meccano publications. It's quite possible that Binns Road had learned from DMD's office junior that the 142 campaign was running all by itself in fully automatic mode with nobody on the bridge to watch how it fared. Frank's staff would have been eager to share the news with him as it demonstrated that all their efforts over the past year and a half had been for nought and they would have been mightily relieved when Frank pulled the plug enabling them to finally publish the photo of the Flywheel Truck in the MM for March 1929. In the following months a flood of readers' photos all featuring the new true-forms were published and Fig. 6.3 shows the clearest of these from July 1928, 'Auckland's First Motor Car' by Mr J Richardson. Although it's a studio photo the tyres are a little bright because there's been too much flare from the flash but clarity is still excellent. One photo that many might have missed though is that in Fig. 6.4 showing a very neat little model racing car by one Carlo Marini from Italy which was printed on page 247 of the MM for March 1929 mentioned above. To act as a tyre

Carlo has used a smooth rubber ring that looks very much like the white Rubber Ring that Meccano finally introduced nine years later in 1938.

Factoring in the publishing lead times of roughly three months it must have been around Christmas 1928

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when Frank lifted his ban and Carlo's model was chosen for inclusion in the March *MM* which means it was another eleven months before the first advert for the junior 142s first appeared on page 892 of the November 1929 *MM* shown here in **Fig. 6.5**.

However, it would be very wrong to think that Carlo's model inspired the creation of the junior 142s - the catalyst for their birth came from an entirely different source I can assure you. By early 1929 I'm fairly sure that Frank had more or less given up on the whole model tyre business and it seems his staff saw no need to ever extend the 142 range beyond that which they currently received from Dunlop. Meanwhile DMD's office junior had heard the horror stories that warned him to have nothing at all to do with Binns Road apart from his current duties so any further 142s would have been the last thing on his mind.

No, I'm afraid you must look further afield than the Meccano-Dunlop axis for the first junior 142 size tyres which first saw the light of day around five years earlier when Michelin proof tested its suite of model tyre moulds intended for CIJ use. By now we should all be familiar with the 3" CIJ Michelin but it wasn't until Mick Burgess sent me the image in **Fig. 6.6** that I first realized just how much Michelin had invested in its CIJ moulds. Shown are the Meccano Michelin 142c and 142d in this advert first printed in the French MM of January 1930. Although I've never come across a 2" Tyre, I'm certain that Michelin had a complete suite of mould sets made for CIJ to produce Tyres from the 3" down to the 11/2" and just possibly a 1" Tyre as well. Since each mould set was tooled from high grade steel it was a relatively simple process to convert them to make Meccano 142s instead of model tyres for CIJ. I trust you've all noted that the French advert was published two months *after* the Binns Road advert but I'll now demonstrate how, just as with the earlier 3" Tyre, the Michelin juniors begat the Dunlops and most certainly not the other way round as Binns Road would have had you believe!

I've found no trace of any 2" Michelins ever being made for CIJ or anyone else and as nobody wanted the smaller tyres either so the unused mould sets





were put in mothballs from probably 1924 onwards. It must have greatly puzzled Michelin when following the launches of the various 142s (the duralumins, the true-forms and also the French 142s) there were

no new offerings of smaller tyres. For CIJ in 1924 Michelin had produced at least three mould sizes but Dunlop had only issued the 3" and 2" tyres so Michelin's staff must have wondered what exactly was going on in DMD in late 1927. Michelin could not have known about the deepening rift between Dunlop and Meccano and how this had effectively killed off all future 142 developments but I reckon that after more than a year with still no small 142s being announced it decided that the time was ripe for it to take action. It would offer to make junior 142s for Meccano using its own mothballed mould sets and so mount a promotional campaign meant to exactly copy Dunlop's blueprint and hopefully exceed its success.

We'll cover the cause and effect shortly but let's look at Fig. 6.6 to see what Michelin did exactly. In each case they took the original CIJ mould set and kept the 'PNEU MICHELIN' intact and filled in the rest of the lettering on both sidewalls. After smoothing down they then added 'MECCANO' in the same large font. Next 'FABRIQUE EN FRANCE' was added to one sidewall with 'MADE IN FRANCE' on the other, both sets of words in a smaller font. Finally, in the same smaller font the appropriate part number '142 D' or '142 C' was added to fill in the vacant spaces remaining in the sidewalls. Before proceeding any further I have to tell you that all of the very rare tyres you'll be seeing from now on have been very kindly supplied by Michel Lhomme, Christophe Dondeyne and Mike Rhoades and without their support it would have been impossible for me to write this history in its current form - so my heartfelt thanks to them all.

If **Fig. 6.6** isn't clear enough then please refer to **Fig. 6.7** to see the actual lettering on real tyres both with their 'Fabrique en France' sidewalls to the front and their 'Made in France' to the rear. The images from **Fig. 6.8** to **Fig. 6.11** show the smaller sidewall lettering positioned in between the major words as a kind of subscript which is why in **Fig. 6.7** the small lettering on the 142d isn't visible as it's hidden from view by the bulk of the 142c positioned above it. It's obvious that the tyres in **Fig. 6.7** have been moulded from a different mould set than that used to make those tyres shown in **Fig. 6.6** and I believe these latter were early production tyres used by Meccano for its final approval and then in the composition of the *MM* advert. Each of the Michelin juniors had a very characteristic tread that would prove to be significant for a number of reasons so we'll look at each in turn starting with the smaller 142c.

Now I had a chance at Easter 2015 to capture a tread view of an individual Michelin 142c but I completely forgot to take the photo and all I have is the group photo in **Fig. 6.12** showing five of these smallest of 142s for comparison purposes. On the far right is

the dainty Dunlop UK 142c from the MM advert in Fig. 6.5 and we'll cover this a little later while the tyre immediately to its left is the Michelin 142c first seen in Fig. 6.7. The three remaining tyres are all later French examples of the 142c but from other producers. Please note that they all follow the precedent set by Michelin with its distinctive tread formed from a pair of parallel indented 'U' or 'V' troughs that completely encircle the tyre's circumference. Please also note that each 142c has been made using a simple two-piece facing mould: yet another precedent first established by Michelin and again adopted by all later French makers of this particular size of Meccano tyre. The use of such moulds was in direct contrast to those used for the Dunlop UK 142c and a world away from those used by Michelin to make the rest of its 142 sized tyres.

In **Fig. 6.13** we see three 142d Michelins supplied by both Christophe and Mike that are posed to get a clear view of their distinctively whorled roundel tread pattern. It wasn't until I was actually setting up the tyres that I suddenly noticed in the camera viewing screen the very distinctive leakage seams dropping down to bisect each of the Tyre treads. It was a very great surprise but I understood the significance at once - Michelin hadn't used a solid annulus - it was sectioned! Counting round each tyre there were three seams which meant that the annulus had three interlocking sections that came

Michelin and again discovered the very same leakage seams only these were much smaller and thinner thus explaining why I hadn't ever noticed them before. Naturally I felt a bit of an idiot and if you look closely at Fig. 6.14 (eight roundels up from the bottom) you can just make out one of the small leakage seams in question. Some of you may remember having seen this same photo before as it has previously featured in Parts 1 and 3 so I am left

wondering if any of you managed to spot this leakage seam long before I ever did - if so then I salute your fine eyesight - well done! If you look closely at the three tyres in Fig. 6.13 you should be able to see that the leakage seam in the lower Tyre is barely visible whereas that of the topmost Tyre is positively bursting out of the tread. This is very indicative that little care was being expended to maintain clean moulds, especially to the crucial annulus sections, and I believe far more emphasis was placed on achieving high volume output. This is in stark contrast to the intensive care taken over the moulding process for those super high quality tyres made for the CIJ Alpha Romeo P2. With this latter we saw that quality was paramount above all else but of course they didn't have the pressures to produce many thousands of tyres from the same labour intensive single cycle moulding process so I think we might forgive the operators a little for their occasional lapses in cleanliness standards. The three annulus sections would have been held in a circular frame that was rotated to bring them all together before the sidepieces were positioned ready for the molten compound to be pumped in. After moulding, the sidepieces were pulled away and the annulus sections would be retracted to allow the hot type to be easily extracted without causing any damage to the tread. The sections were small and buried deep inside the frame so they would have needed a lot of time-consuming care to keep them in pristine condition and with

> the demand for high volumes it's no surprise that cleaning was often minimal so adversely affecting the quality of finish as seen in **Fig. 6.13**. Also remember that these tyres used a compound that was of a lower quality with more kaolin content than that used to produce CIJ's P2 tyres.

together to form a whole: the implication being that Michelin hadn't used three-piece mould sets but instead had used far more complex five-piece sets.

I eventually took the photo but not before I had rushed off to examine my library shots of Mick's CIJ



Michelin supplied Meccano France with 142s for at least one year or perhaps even two so I would guess that volumes could have been in excess of ten thousand or maybe even a little more for each size of tyre. Such figures are several times greater than the P2 volumes but even so Michelin would never have counted this as a successful effort as it completely missed its intended targets which were the whole of the British Empire itself and the rest of the English speaking world. These were the big prizes that Michelin had in mind when it initially approached Meccano France in early 1929 with some early (non-Meccano) samples to show off the type of model tyre that it had to offer.



Mr E R Robinson was Hornby's trusted man who ran Meccano France for him and he'd have known immediately that only Frank Hornby himself had the authority to sanction any such deal with yet another huge tyre producer who just happened to be Dunlop's bitterest European rival. I'm certain that Robinson knew all about Frank's trouble with Dunlop and that any 'arrangement' with Michelin would assist in fulfilling his hot vendetta against those despised Dunlop Marketeers and erase the still raw memory of his blackout campaign that had failed so ignominiously just weeks before. Just as Michelin would not have known anything about the latter it also would not have been aware of the imminent sale of Frank's New Jersey site thus effectively slashing Meccano's footprint in North America: the biggest single market of them all. So, unaware of these situations, Michelin gladly entertained aspirations of global coverage for its upcoming campaign but I'm sure that Robinson had called it right and he knew from the outset that Frank would use Michelin to finally get his revenge on DMD. Frank would have requested full production samples as per his specification that included the

> correct part numbers with the smaller tyre being the 142c, the larger being the

142d - exactly matching the same pattern as used for the earlier 142s. Now this particular numbering convention isn't immediately obvious to me (and I suspect to a lot of others) and I don't actually know if anybody has ever pinned down why it ever came to be adopted. My only suggestion is that possibly Frank had only ever intended to have just the one size of tyre, the authentically proportioned and much better looking 2" 142a. This matched its peers, the tinplate and cast sizes of wheel/tyre combinations issued by the likes of CIJ and Erector so why did he need to bother with anything bigger? But for some reason, maybe prompted by DMD, the 3" 142b, simply an awkward looking stretched 142a, was added to the range and so the precedent was set on how the 142s must be numbered. I'll admit it's not a very good suggestion so I'm hoping that

someone else can enlighten me if at all possible.

Of course we know exactly why every French 142 had its part number on its sidewall starting with the early Dunlops that we first saw in Part 5 with the practice then being adopted as standard and later applied to all subsequent 142 offerings no matter who made them. I suspect that many of you will have already guessed the answer which is that it was all to do with the fact that the first French Dunlop 142s were made anonymously in Germany. You'll remember that if the item being made was only a component part then it didn't need to have the 'DRGM' logo placed upon it and this would have made life a lot easier for Dunlop to import its 142s for Meccano to sell in France. So to emphasise and reinforce the component status of the 142s the actual part numbers were moulded into their sidewalls hence establishing a uniquely Gallic tradition for all Meccano 142s from this era.

In due course Michelin's full production samples were delivered to Binns Road for evaluation and of course the obligatory photo session from which Fig. 6.6 was produced to announce the new tyres to the French MM readers. Michelin would have been disappointed to hear that the US factory was





being sold and that the British Empire market was still undecided but it was eventually offered a deal to supply Meccano France with 142s, so covering France and the rest of Europe, the very extensive French Empire and (quite







Les Shadoks

possibly) Canadian Quebec so it would still have a toehold in North America. What would have also enticed Michelin was the very distinct possibility of also supplying the large 142s if Dunlop France pulled out and, if Fort Dunlop ever dropped out, the opportunity to supply all four 142s to Binns Road. I don't doubt that Frank would have discussed the possibilities of such future expansions to their initial contract with Michelin that Frank had Robinson sign on his behalf as head of Meccano France probably by early summer 1929. I'm also very sure that Frank was quite prepared to sever all ties with Dunlop both in France and here in the UK if either one or the other chose to be uncooperative.

Thanks to CAM's photographer **Jacques Vuye**, we are pleased to present a good picture of **Philippe Baudeau's** prize-winning work in its entirety as seen at Calais. It is populated by the circular bird-like Shadoks and Gibis: they are in the hopper (below), pumping (which they did incessantly, lower right) and riding along their separate, mismatched Channel Tunnels on short trains (inset).



This must have been another very happy time for Frank only this time without any delusions about his role in things for he was indeed a king maker brokering alliances for two huge enterprises and having the nerve to pit one against the other and gambling that Meccano would emerge a winner. It would not have bothered Frank in the slightest that his French factory would be taking supplies of French tyres from a French tyre manufacturer as it would have seemed entirely natural to him. Here in Britain I'm sure he would have wanted to take his Tyres from Dunlop just as in America he'd quite rightfully taken them from Dunlop USA but if DMD now failed to supply junior 142s he'd take huge pleasure in cancelling his 'arrangement'.

To get its campaign up and running it's clear that Michelin accepted more

or less the same contract that Dunlop and Meccano had first drawn up some years before. This is confirmed in Fig. 6.6 where it's shown that Michelin's 142s complied with the pricing structure applied to the French Dunlops and that after currency conversion all four French 142s matched the sterling prices charged for their UK equivalents shown in Fig. 6.5. But before he was prepared to ship out any Michelins in France Frank wanted to see if he could force an unwilling DMD to also supply him with junior 142s to match his brand new Michelins. So I can imagine it was a dreadful shock for DMD's senior managers when they received an invite from Frank to join him in Binns Road to discuss an expansion to the almost forgotten 142 programme. After their near suicidal misjudgement handling the LB 142a, DMD seniors had learned the hard way to never underestimate Frank Hornby ever again so consequently I'm sure they'd have urgently sent a team to discover what precisely he had in mind. Frank would've relished such a meeting as this wasn't going to be simply a case of the tail wagging the dog - he was planning to give it a right good kicking and was determined to enjoy every minute of it. This was an encounter that he was never ever going to delegate.

With malicious glee Frank would have informed Dunlop's delegation that its great rival Michelin had already expanded the 142 range of Tyres for him and it would shortly be supplying Meccano France with its new junior 142s. To reinforce this announcement I'm sure Frank would have offered up production samples of the new Michelins for his visitors to examine. He'd have then stated that



Michelin was eager to supply Binns Road with the new Tyres for distribution across the Empire but before he agreed to this he was wanting to hear if Dunlop might want to supply its own junior 142s in a style matching those that it currently made. Frank's parting shot was that as well as the juniors Michelin had also expressed a wish to produce the larger 142s since it already possessed a complete range of mould sets and it was eagerly awaiting its opportunity if DMD was to ever shut down its campaign.

Shell-shocked is probably the best way to describe how Dunlop's team might have felt. I suspect that they asked for a delay but I can see Frank wanting to turn the screw for a final time by giving them a deadline. He didn't want to

keep Michelin waiting so he would want to launch his French Tyres by the New Year but traditionally Binns Road had always announced any new product first so I'd guess that he'd want to launch in the UK by December 1929. Perhaps I am over dramatising Frank's meeting a little but I'm absolutely positive that it did happen more or less as I've described it as I'm sure Frank would have wanted to appear as a King in his Court when he confronted DMD's team to force it into revitalising its 142 programme with the threat of having its campaign monopoly broken across the Empire by its fiercest rival. It's an odd fact but I believe that DMD was very fortunate that Frank seemed to be more obsessed with enjoying his vendetta rather than actually getting his junior 142s to market. If he'd been less single minded then it's very possible that he could have simply given Michelin the right to flood the Empire with its junior 142s from the outset as it would have been a far more peaceful and stress free process than taking on DMD to teach them a lesson. As it was he probably came close to giving himself a heart attack with all the excitement and with his blood lust rising to near fatal levels. Of course he could have prompted DMD into near panic stations by simply sending the photos, the samples and his ultimatum by courier but he truly wanted to enjoy his moment of victory in person as he'd probably been anticipating the thrill of the kill ever since he had taken on Michelin and been given the chance to exact his sweet revenge.

As soon as they saw Michelin's tyres DMD's team knew it had to make its own junior 142s to thwart

any invasion from Michelin - it didn't matter that it had no authority to do so as it would sort out any jurisdiction issues with the Board at a later date. DMD now had a problem on its hands but at least Frank had given it fair warning. The Michelin campaign in France was a shocking revelation and there was practically nothing that could be done about it except to warn their colleagues in France and hope that Michelin's programme would have less of an impact than Dunlop's fine looking 142s and that it would simply run out of steam - which it did of course but we will cover that in a moment. Back in England DMD simply had no choice but to immediately commission its 142s



and then get Frank's approval - all within just three months to meet Frank's very tight deadline. Dunlop's Board would have been badly shaken to hear of Michelin's plans but DMD's timely initiative would have been warmly praised and I believe that it was probably this success that won back full control of the 142 programme for DMD. One other aspect is that in meeting Frank's challenge and in order to win his approval for its tyres DMD had decided that both of its new 142s (not just the 142d) would be scale copies of its full sized originals thereby making its offerings superior to those of Michelin. However, just as with its 142b, yet again DMD failed to fully appreciate the technical reasons that determined the form of the Michelin Meccano 142c tyre.

I think Frank must have been delighted with the Dunlop juniors and I suspect he'd been rooting for them all along. So he must have been very pleased when they were launched a month earlier than his own deadline. Sorry no originals but Mick Burgess has kindly supplied two Tyres from 1934 shown in **Fig. 6.15**. They look very handsome together but if you have never actually handled the small

Dunlop 142c yourself you may never be able to appreciate the inherent weaknesses in the design of the tyre. After over eighty years Mick's tyre has stiffened up a little but it's quite bendy indicating a very low level of kaolin content in the original compound. Just as with the larger tyres, both Dunlop juniors were made using three-piece annular mould sets and it's here where the rather serious problems arose. You'll remember that when the tyres first emerge from the moulds they're near scalding hot and as soft as marshmallow. Handling such

vulnerable mouldings always required gloves but trying to tease out a tiny 142c from its one-piece annulus whilst it was still boiling hot was always going to be a very tricky operation. Consequently I'd bet that the solution was to use operators who were adept with small fingers inside small gloves and the fairly obvious conclusion is that this most difficult of tasks was performed by women as had been the tradition since before the industrial revolution. Even so the tiny 142c would need to be given time to cool down and so firm up a little before it could be safely extracted without any tearing. It should therefore come as no surprise to learn that these tiny

'rubber' tyres were never 'mass produced' in the normally accepted sense of the words and I'm fairly sure that the average production rate of the 142c would have been only in the region of about forty an hour if extraction damage was to be kept to a minimum. Consequently it was the tiny 142c Tyres that were the most expensive for Dunlop to produce on a per unit basis and this once and for all exposes the falsehood behind Meccano's 142 prices as listed in **Fig. 6.5**.

Despite the inherent production difficulties and the resulting high costs Dunlop still continued to supply limited quantities of the 142c throughout the next four years or so until 1934 when Meccano finally introduced its own 'ribbed' Tyres and we'll cover these Tyres next time in Part 7. Even though its price was kept artificially low I suspect that due to the shortfalls in supply the 142c was never sold in large numbers and then only as a spare part so consequently it was always considered a somewhat scarce item and this is reflected in the fact that it's quite a rare item today. It's also rather significant to note that no junior 142s were ever shipped out in any of those fabulous outfits from the inter-war



years and it wasn't until 1951 before outfits first included the tiny 142c but that's a story for another time.

It seems after having vented his spleen against DMD's contingent and then seeing their efforts to please arrive so soon on his doorstep, Frank's heart warmed to them so much that he allowed a kind of rapprochement to develop between his own Binns Road staff and the once despised and now brought-back-to-heel Dunlop Marketeers. The better working relationship between both parties opened the way for new opportunities and it was from this point onwards, especially after Frank retired yet again to take



up politics, that Meccano turned to DMD increasingly for a number of its special tyres, the most obvious of which being those included in the Meccano Car Constructor Outfits as now shown in **Fig. 6.16**. Though such Dunlop tyres are not (and never were) official members of the 142 Tyres series and form no part of this history, I'm hoping to add some comments where appropriate about these and other examples next time.

Meanwhile back in France, despite the positive words from Frank, Michelin had most probably always been expecting that eventually Dunlop would be chosen to supply Binns Road with its junior 142s. Partly expected though it may have been it was still a bitter blow for Michelin's plans for global coverage and more or less guaranteed that its junior 142s would only be supplied for the shortest possible contractual period. I don't have any evidence but as I've said before I'd guess this was no more than one year, or two at most, after which the way was then clear for Dunlop France to supply its own juniors which we'll see shortly.

From the Figures it's obvious that the Michelin 142c differed greatly from Dunlop's and there's a lot more to this than immediately meets the eye. Dunlop's offering was an attempt to make a very authentic looking tyre but it was very costly to manufacture. In stark contrast, Michelin's 142c makes no effort to replicate a full size tyre but instead it looks much more like a simple rubber grommet rather than a proper model tyre and its form is dictated by the fact that it was meant to be mass produced at a unit cost that was only a tiny

fraction of the cost of the

Dunlop tyre. Where each

Dunlop was moulded one at a time, for the

probable that as many

as 24 or 25 tyres were

multiple position two-

piece facing mould

configurations were

produced in each mould

cycle. The most efficient

Michelin it's most

either a five by five matrix or a four by six, in each case giving the appropriate output stated above. Each configuration used feed tubes that were both wide and short with efficient fan out to deliver the hot compound more or less evenly across all of the tyre positions concurrently to allow fast moulding cycles providing low cost high volume outputs.

It's been estimated that even allowing a massive forty second cooling pause before extraction as many as 1500 tyres could be produced every hour which of course is in a totally different league to not just the Dunlop tyres but also its own 142d production rate which would have been at best around 120 per hour. Of course the big question to be addressed is why did Michelin employ two such radically different production processes for its two Meccano Tyres? Though it's possible that Michelin may have had a suite of four mould sets in stock from 1924 onwards I don't believe this was the case because at the time there wasn't any call for a small 1" model tyre from any major toy manufacturer - and most definitely not from CIJ. So Michelin only ever had its three five-piece sets to make the three larger scale model tyres for CIJ but only the P2 set had ever been used it seems. Consequently when it wanted to supply Meccano with Tyres for the 11/2" and 1" Pulleys it already had the five-piece mould to make the 142d but it needed to commission a brand new mould set for the 142c. But in the five years since it made the first moulds for CIJ its priorities had drastically changed and it decided that low cost high volume production capacity was far more important than good looks so it ended up with authentic rubber grommets instead of scale model tyres. Regardless of how they were made, the two Michelin 142s stood out from each other like chalk and cheese, a classic case of quality vs quantity.

As promised, and in correct chronological order, I've detailed the main events of how the Meccano juniors came about, admittedly with perhaps a bit

> more dramatic embellishment than you'll find in your normal history books but if you have a Frank Hornby in your story then there's always going to be a bit of spite and fury to liven things up. I most certainly stand by my account as I believe it's the only way to accurately explain what actually took place all those years ago. If you wish to



believe that the Dunlops were developed first and so were advertised first then you have the truly impossible task of explaining exactly how the Michelins came to be advertised in France just two months later. More precisely it first needs to be explained



how the Meccano Michelins actually came to exist in the first place so that their photos could then be used in an advert. Over the forty years since both companies were first founded in 1889 the rivalry between Michelin and Dunlop had matured into the bitterest of struggles with neither giving the other an inch. So I'm absolutely confident that if either Dunlop or Meccano had developed junior 142s first then the End of the Universe would have arrived before Dunlop would've allowed Michelin to muscle in and try to takeover even the smallest part of its very own Meccano 142 campaign.

So I'm afraid the 'Dunlop First' scenario needs to be eliminated from our story as it wouldn't have permitted the creation of the Michelin 142s that we see in **Fig. 6.6** and therefore I maintain that my 'Michelin First' is what truly happened as it's the only solution to allow the existence of those aforementioned Michelins. Dunlop France must have been rather upset to discover that it would be sharing its Meccano platform with its fiercest rival but soon enough it would have been relieved to hear that Michelin only planned to continue supplying 142s for about a year or so - thereafter leaving a product vacuum which Dunlop eagerly filled with its own range of new 142s.

Fig. 6.17 on page 56 shows a stack of Dunlop's new blue Tyres that we first saw in Part 5. I hope you'll all notice that, apart from the 142c on top, every Tyre has been made using its new three-

piece annular mould sets that Dunlop had instructed its German manufacturer to employ for its new blue Tyres. Now last time I stated that Dunlop's decision seemed to be a technological regression but I believe that they were merely following the precedent set by DMD to blindly copy Michelin's process for making superior model tyres. Having seen the Michelin 142d convinced them to dump their existing two-piece facing moulds and adopt the supposedly technically superior annulus



moulds. So just like DMD before them yet another Dunlop team opted for an advanced process without once fully understanding its true *raison d'être*.

However it seems there was one lesson that they did

learn from DMD and that was to never try to make a tiny model 142c with a three-piece mould set. It's a fact that we have no evidence that Dunlop France ever supplied Meccano France with any 142c Tyres and I don't think this no-build policy was adopted simply because DMD was having a lot of difficulty producing its tyres. If it had wanted to it could have supplied 142c authentic grommets just as cheaply and just as ugly as Michelin's but copying such a distasteful tyre would have been terribly unpalatable. I think Michelin had signed up to a minimum batch run contract - the kind of thing that we saw in the USA. No IMM firm was going to go to all the trouble of setting up, running for a couple of hours, only then to shut down and do a clean-out all for a small run of just 3000 tyres. At 1500 an hour I reckon Michelin maybe chose either a full-shift or a half-shift run and ended up paying for a much bigger batch of Tyres than it had ever intended at the outset. It would not have wanted to waste these Tyres so they'd all be shipped to Meccano to await eventual despatch. So when Dunlop launched its new blues it didn't need to supply the 142c as Meccano still had far too many unshipped Michelins still left in stock. Referring back to Fig. 6.17 again we still have that small blue 142c sitting on top of the pile but it isn't a Dunlop - it's the very first ever genuine Meccano 142 Tyre issued sometime around 1932, nearly two years before Binns Road ever shipped out any Meccano tyres of its own. Please refer to Fig. 6.18 showing a greyscale side view of this blue 142c.

Identical letters appear on both front and back and they read as 'MADE IN FRANCE', 'MECCANO PNEU' and the part number '142c'. I'm sure that you don't need me to tell you that the two-piece facing mould set that made this tyre was actually made in England. Apart from the word 'PNEU', which is the specific French word for a pneumatic rubber tyre, all the other words are in English. If the mould set had been made in France then most certainly it would have had 'FABRIQUE EN

Fig. 6.26

FRANCE' somewhere upon it but it's nowhere to be seen. However the biggest blunder is the insulting 'MECCANO PNEU' that breaks one of the basic rules of French grammar. In England it could be read as 'Meccano Tyre' as the qualifier always precedes the noun but in the French language the noun is dominant so it's the qualifier that trails the noun and consequently the expression should read as 'PNEU MECCANO'. An elemental flaw pointing to the true origins of the tyre's mould set.

I imagine that at some point after Dunlop began supplying its new blue 142s the Michelins finally ran out and perhaps Dunlop then dithered over supplying the 142c. Consequently E R Robinson must have decided that Meccano France should commission its own mould set to have its very own Meccano Tyres made very cheaply and very locally in France just as Michelin had done since doing a 'Dunlop' and going to the Germans was something that just didn't feel right. I cannot tell you why he had the moulds made in England but he most certainly did so, I'm sorry to report, and nor was the blue 142c the last one. In Fig. 6.19 you can see the follow up Tyre that's moulded in a grey-black compound but still from yet another mould set made in England with again the same grammatical error. For some reason that I can't explain this second 142c was just a little smaller than the first with **Fig. 6.20** showing the rather small difference in their diameters. Some of you might even be able to pick out small differences between each Tyre's sidewall lettering that's just visible in the relevant figures thereby confirming that each Tyre comes from a different mould set. Fig. 6.21 on page 56 shows Meccano's first 142c laid out in side view amongst the same Tyres from Fig. 6.12 to demonstrate its vibrant blue colour. Its special shade of blue compound was chosen to match Dunlop's early blue 142s and it's this that enables us to date its launch fairly accurately.

Before proceeding further it's very interesting to note that within a year of Meccano launching its very own 142c in France the Binns Road drawing office began work on the designs of the first ever home produced 142s in March 1933, these Tyres first launching a year later in 1934. I think it's a fair bet that the successful experience in France using British two-piece facing moulds convinced Binns Road that they really could finally make their own low cost Tyres in sufficient volumes such that they didn't need to rely on DMD any longer: there'll be more on this topic in Part 7.



In **Fig. 6.21** we can now identify the 142c Tyres from right to left as the Dunlop UK, the Michelin, the Meccano France (blue), the Meccano France (black) and finally the Meccano Hutchinson that was first issued in around 1936. It has been said that American Hiram Hutchinson (HH) was a friend and colleague of Charles Goodyear who part financed HH's first rubber factory in France in 1853 making it the

World's second oldest and still globally operating rubber and tyre company. When Dunlop France ceased supplying Meccano with its 142s in 1935 Hutchinson simply stepped into the breach with its own suite of tyres shown in **Figs. 6.22**, **6.23** & **6.24** - all of these examples are again courtesy of Michel Lhomme. All of the 142s are moulded from multiple output two-piece facing moulds which made them very cheap to produce in volumes large enough for Meccano's needs.

Fig. 6.22 shows that for every Tyre, one sidewall bears the words 'PNEU HUTCHINSON' with the 142c also having the extra word 'MECCANO' and the number 'P 44' on the same facing sidewall. I'm very sorry but we don't have any answer yet as to why this smallest Hutchinson carries 'P 44' and not '142c' on its sidewall so if anybody does have the answer could they please let us know? Never mind, I'm calling it a 142c because it looks and feels like one and it almost exactly matches the Michelin in size and tread pattern in Fig. 6.12. The Hutchinson is on the far left of the row of Tyres with the Michelin being second from the right next to the Dunlop 142c - all Tyres being posed in the same order as in Fig. 6.21. Fig. 6.23 shows that the reverse sidewalls of the large Tyres carry the word 'MECCANO' along with their appropriate part numbers. Although they're not shown in any specific figure, being just visible in Fig. 6.24, these same reverse sidewalls have the words 'FABRIQUE EN FRANCE' moulded on them in the same bold font. This same phrase is also moulded on the reverse sidewall of the 142c which also has a repeat of the word 'MECCANO'. Fig. 6.24 shows the bold chevron tread pattern on the three larger Tyres. Note the similarity with the Dunlop USA 142s that we'll feature shortly. Hutchinson supplied its Tyres until the outbreak of WWII which means that every one of these Tyres must be at least 75 years old. I find this terribly hard to believe as they're all wonderfully supple just as though they only popped out of the mould yesterday and the answer lies in the super quality of Hutchinson's compound which is undoubtedly

the finest that I've ever encountered. Of dark grey hue, firm yet flexible, there is absolutely no sign of any ageing, not even a single micro-crack anywhere on the surface - phenomenal!

Having introduced nearly all the main Tyres from this era we can now view them all for comparison. In **Fig. 6.25** the 142d Tyres are all posed in sideview and **Fig. 6.26** shows all the tyres in the same order in a tread view.

From right to left we have the Dunlop UK, the Michelin, the Dunlop France (early blue) and on the far left the Hutchinson. There are two Tyres missing from this line-up and these are firstly the later dark blue Dunlop France 142d and secondly an example of the Dunlop France 142d in the dark grey compound that the company adopted for all of its 142s during its final years in tenure before Hutchinson took over. Fig. 6.27 is interesting because it shows a 142d sized Michelin tyre of the sort which could have been intended for CIJ but instead looks very much like one of the originals that was handed to E R Robinson for initial evaluation by Binns Road. If it's not one of these tyres then it's possible that Michelin might have made a batch for CIJ or perhaps some other model maker even though we've never found any trace of such a venture to date. So the tyre in the photo could be a survivor from the first offering or from a different yet to be discovered project but I suspect that we'll never get to know for sure.

Fig. 6.28 shows a small selection of 142a Tyres in tread view. We've seen them all before but now they're lined up to show how they compare with one another in size. I'll list the missing ones but first let's see what we have - so from left to right they are Dunlop France (early blue), Hutchinson, Dunlop USA and a Dunlop UK (true-form). The difference between the two chevron treads is easily seen by comparing the full chevron pattern on the Hutchinson with the half reverse chevron down the central spine on the Dunlop USA Tyre. There

Lined up for SMGJ127 How They Did It in April's contest An SMG look at Skegex 2016 Les Megget's small-scale AH3000 More strange steam from Ken Ashton Ian Brennand's pair of Citroën 2CV vans Lots of other goodies and maybe your contribution!



are three missing Tyres and they were made by Dunlop France - the early dark grey two-piece tyre, the dark blue three-piece annular tyre and lastly this latter in the final dark grey compound mentioned earlier. Even Michel and Christophe weren't able to ship over any of these for my 2015 photo shoot.

Lastly on page 56, **Fig. 6.29** shows a wonderful family photo featuring seven 142b Tyres. Starting from left to right they are Dunlop USA, Dunlop UK (true-form), Dunlop France (dark grey), Dunlop France

(grey blue), Dunlop France (early blue), Dunlop France (later dark blue) with the Hutchinson on the far right. Missing from this group is the final Dunlop France final dark grey compound 142b that pre-dates the Hutchinson.

Unfortunately I cannot tell you if we'll ever see any images of the missing Tyres - one day maybe. For those interested in the stats the tread band counts for the Dunlop UK juniors are 45 for the 142c and 50 for the 142d. For the Hutchinsons the counts are 64 (142b), 56 (142a) and 48 (142d).

So for now that's just about that and I'm sorry it's been such a long and tortuous journey but next time we'll be returning to Blighty to see what sense we can make of the plethora of different 142s that Dunlop produced when it was still shipping Tyres to Binns Road. We'll get to view the drawings that defined the very first Binns Road 142s and we'll see the very best 142s that Dunlop ever made and I promise that we'll finally see how it all ended up between Walter Lines and Frank Hornby.

John Learman

Coming up in Part 7

142b Variations - The First Binns Road 142s Frank's Parting Shot - The Final Dunlops

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SELMEC, Falconwood Community Centre, Kent, DA16 2PG 30th June - 3rd July NMMG at Skegex 2016 NELMC, Hainault, Essex, IG6 2UT MMG at the British Motor Museum, Gaydon, CV35 oBJ 20th - 21st August TIMS, Blists Hill Victorian Town, Ironbridge, Shrops, TF7 5DU 20th - 21st August NMMG at Lincolnshire Steam Rally MSoS with AGM, Smith Art Gallery, Stirling, FK8 2RQ; 14:00 to 16:30 NEMS, Dales Care Centre, Wycar, Bedale, North Yorks, DL8 1ER HSME gathering, Christ Church Centre, Reading Road, Henley, RG9 1AG; 10:00-17:00 MSoS at 'Farming Yesteryear', Scone Palace, Perth, PH2 6BD, Scotland SELMEC, Falconwood Community Centre, Kent, DA16 2PG NMMG with AGM and auction, Oxton, Notts, NG25 oSA WLMS annual exhibition, Townsend School, St Albans, Herts, AL3 6DR RMG, Lyne Village Hall, Chertsey, Surrey, KT16 OAN MMG with AGM, Baginton, Coventry, CV8 3AB SMG meeting, SMG Members' Award, President's Trophy, AGM & auction, Laughton-en-le-Morthen Village Hall, Rotherham, South Yorks, S25 1YD SBMC, Hall Green, Birmingham, B28 9BO HTMC, St John's Church Hall, London Road, Hildenborough, Kent, TN11 9HT NEMS exhibition, St Cuthbert's Church Hall, Darlington, Co Durham, DL1 5QG SELMEC, Falconwood Community Centre, Kent, DA16 2PG TIMS, Coalbrookdale, Shrops, TF8 7DO WLMS, Greenford Community Centre, Middlesex, UB6 9JS MSoS, Smith Art Gallery, Stirling, FK8 2RQ; 14:00 to 16:30 HSME with AGM, Christ Church Centre, Reading Road, Henley, RG9 1AG; 13:00-17:30 NEMS, Dales Care Centre, Wycar, Bedale, North Yorks, DL8 1ER NELMC 'Hainault Hangout', Hainault, Essex, IG6 2UT

Contacts as it can be worth checking before travelling (www.hsomerville.com/meccanoevents)

SMG John Ozver-Key or Bob Seaton (page 2) and please let us know if you intend to bring anything large and/or travel a substantial distance so we can reserve a space for you

CAM Jean-Francois Naurov Kim Fisher HSME MMASI June Booker HTMC Jim MacCulloch **Roger Marriott** MMG **MSoS** Alan Blair **NELMC** Ralph Laughton NEMS Tim Roylance NMMG Geoff Brown

RMG Nick Rodgers SBMC Bob Thompson SELMEC Chris Warrell TIMS Tim Martin WLMS

630: the last part

Hats are taken off for Mick Burgess, Ken Ashton, Russ Carr, Albert Howe, Graham Jost, Hellmuth Kohler, John Learman, Margaret & Raymond Massingham, Lesley Mitchell, Jean-Francois Naurov, John Ozver-Kev, Ken Ratcliff, Bob Seaton, Tony Seed, Frank Singleton, Jacques Vuye, John Wilson and everybody else who has contributed irrespective of scale. To the wider benefit of the hobby, those in receipt of our Sheffield Meccano Guild Journal are welcome to extract or use the contents provided that both the original author and the SMG are acknowledged as the sources. Original materials are obtainable via the Editor. RM & RC

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everal of us in the MMCI fly the club flag at venues and shows other than our own during the average year - around six or so per annum. One of our favourites is at Kyneton, in the former gold-mining area of central Victoria, in conjunction with a local model railways show over a three-day weekend in March.

This year it was lovely, with temperatures no higher than 28^oC - wonderful! The dear little tram, 1, by Mike Maloney was controlled by the Meccano infrared Action Control system of the 1990s, all tightly tucked in along with motor and battery. There's a bit of camera fudge with the (supposed!) high-speed braider action shot **2** and the aftermath of some pretty modest engineering too - not mine, **3**! [Ed. A likely story...] The Edwardian car, to the right of **4** might just as well not have been there as from memory just one person commented on it. Both braiders had a good workout and the travelling braider - in this *SMGJ* - is now (March) set for New Zealand. It and the compact Servetti



machine (CQ111) ran beautifully but the braid from the Servetti is superior. Unfortunately, Servetti is still just too big to travel as is. We did spend some time reviewing how they might each fit into our cases, and the traveller won, spacewise. It is also a full 2.0 kg lighter at 3.5 kg versus Servetti's 5.5 kg.

Graham Jost

3!

