
MSS

**MECCANO SOCIETY
of
SCOTLAND**

NEWSLETTER



No.82

APRIL 2010

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DATES FOR YOUR DIARY

Balado	8 th /9 th May
Constructors Day and the Menstrie Challenge	22 nd May
Skegness	2 nd /4 th July
Society meeting, Smith's Museum, Stirling	22 nd August
Annual Exhibition, Scone	11 th /12 th September
Cathcart	30 th / 31 st October
Greenock	6 th /7 th November
Society Meeting	21 st November

ACTIVITY

It's that time again. The winter having passed (if only just), the April meeting of the Society discussed and planned for a whole series of activities running from now through to November. What strikes one looking at the list is that the number and range of activities seems to increase year on year. Briefly, we have:-

May	Balado	exhibition
June	Inverness	Schools competition
July	Skegness	exhibition
August	Society meeting	
September	Scone	Annual exhibition
October	Cathcart	exhibition
November	Greenock	exhibition
November	Society meeting	

This means at least one event every month except December. Although Skegness is not organised by MSS we have for the past year or so taken a set of tables – identified as Meccano Society of Scotland – and three or four of our members have attended.

An addition this year is the schools competition in Inverness. This will involve those members taking part in a lot of work and (for most) a long journey. Never the less it looks like being a worthwhile initiative and a good way of involving young teenagers in Meccano. Interestingly it would have been impossible for the Inverness Education Authority people to organise this without the whole hearted support of the Society and especially those members who are lending Meccano sets and taking part in presentations and judging.

Hopefully this year the Scone site will emerge from its winter quagmire and not be re-inundated as it was last year. This is our “flagship” event and is always very well supported by the public. Mark you the same is true, if to a slightly lesser extent of Balado, Cathcart and Greenock. All three of these provide us with very good opportunities to show our models and engage the public in conversation about Meccano.

What we do need to be sure of is a good turn out of members (and models!) at each. So, now, get your diary, refer to the dates at the bottom of the opposite page and enter them. Above all, when the time comes, BE THERE.

* * * * *

SOCIETY MEETING, 24th January 2010

The meeting was held in the Smith Art Gallery and Museum, Stirling at 14:00 hours. Members present were Douglas Carson (Secretary), Alan Macdonald (Treasurer), Andy Knox, Margaret Tattersfield, Bert Hutchings, Gordon MacMillan, Jim Berrie (Hon. President), Desmond Smith & guide, Angus Plumb, Jim Gregory, Jackie Inglis, Angela Goodlet & Alstair Nicoll (Newsletter Editor). Apologies were received from Ken McDonald, Alan Blair & Tim Edwards.

The Secretary wished all present a happy New Year.

1. Intimations: with regret the Secretary reported that:

- a) Dick Martin had died in December 2009. Jim Berrie, Alan MacDonald and Alan Blair had been able to attend the funeral in Falkirk and convey the Society's condolences to the family.
- b) David Lawrence of Seneca, SC, USA had died on 16 January 2010. David was perhaps best known to members as an enthusiastic proxy competitor in several of our Menstrie competitions and his ingenious entries will be missed. [The Secretary has since sent the Society's condolences to David's widow.]

2. Correspondence: the Secretary reported the following correspondence:

- a) An information sheet from the Southern Federation of Model Engineers giving further clarification on the subject of CE markings for miniature steam boilers. This affects the availability or otherwise of public liability insurance for organisations steaming engines at public displays.
- b) A request from the Southern Federation of Model Engineers to review the Society's details to which the Secretary had responded.
- c) An email communication from Ms Tracy Tamijmarane of Inverness College requesting the Society's participation in a Science Festival she is organising. This is covered in detail below.

3. Treasurer: Alan Macdonald reported that four members have yet to renew their subscriptions. Two new members, Gordon Brown of Galashiels and Alan Ramsay of Dundee, had joined the Society. £60 had been raised at the last meeting from the sale of Meccano donated by Mr Tom Wilson of Stirling.

4. Newsletter: The Secretary informed members that it was possible to distribute the Newsletter electronically thus saving the Society the associated printing and postage costs and inquired if any members would be interested in this. There was little support for this idea. Andy Knox suggested posting the Newsletter on the Society's website. It was pointed out that although back numbers of the Newsletter are available from the website it was considered wise not to make available the most recent editions as this might be a disincentive for people to join the Society. After discussion, it was agreed that if any member preferred to receive the Newsletter electronically then they should contact the Treasurer to arrange this.

5. Exhibitions (Future):

- a) Steam in the Park, Balado, 8/9 May 2010, date now confirmed. It is assumed that we will again be invited to this event. Alan MacDonald will ask Alan Blair to contact the organisers.
- b) Farming Yesteryear and MSS Annual Exhibition, Scone, 11/12 September 2010.

- c) Cathcart, 30/31 October 2010.
- d) Greenock, 6/7 November 2010. This is a week earlier than previously intimated.

6. Inverness Science Festival: The Secretary had been contacted by Ms Tracy Tamijmarane of Inverness College requesting the Society's participation in a Science Festival to be held in June in Inverness. After discussion between the Secretary and Ms Tamijmarane an outline of proceedings had been agreed, which the Secretary then described, subject to the Society's general agreement.

The event will be in two parts: a "Meccano Masterclass" delivered to schools in Inverness and Fort Augustus on Friday, 4 June, and a public MSS Meccano exhibition in Inverness on Saturday, 26 June. The exhibition will also include hands-on construction and the award of prizes to schools in a Monster Meccano Building Competition, the winners to be judged by the Society. Six schools with pupils in the age range S1-S4 are expected to take part. Members were in agreement that the Society should participate along these lines and discussion then followed about the best way to deliver such a programme.

It was agreed that a traditional No 3 Set with the addition of a M0 motor and battery pack would make the best basis for the schools building competition. Copies of the relevant manual could also be provided to give ideas. It was thought that a modern Meccano set, e.g. the current 15 or 20 Model set, would be too limiting given the prevalence of limited use parts. Bert Hutchings thought that he could make up the required number of sets at an approximate cost of £25 each. These could either be loaned to or purchased by the organisers.

A sufficient number of members present volunteered to take part in the public exhibition to make it viable. It is hoped that members located in the North East will also be willing and able to participate.

Bert Hutchings suggested that for hands-on public construction, a Set 0 model should be built and two or three packs with the requisite parts be provided for the public to also construct the built model.

Andy Knox kindly volunteered the services of two of his PhD students who are resident in Inverness should they be required. (Andy also described his interesting use of Meccano as a teaching aid for 1st year electrical engineering undergraduates at the University of Glasgow.)

The question of travel expenses was also raised. The Secretary agreed to discuss this and the other ideas noted above with Ms Tamijmarane in the near future.

7. Dates of Future Meetings: These are 28 March, Saturday 22 May at Menstrie Scout Hall, 22 August and 21 November.

8. Other business:

- a) Alan MacDonald showed a partially constructed model of a purple Volkswagen Beetle. This was an attractive model and some members wondered if a motor could be added.
- b) Desmond Smith showed a small model of a fork lift truck and a clockwork motor he had obtained at a swap meet. Desmond asked if members thought swap meets

were worthwhile. Opinion was that Meccano was only rarely to be found at such meetings.

- c) Jim Gregory asked if the Saturn V model was still available from Frizinghall. Nobody knew the answer to this question. Jim reported that his Meccano model of a children's roundabout in the window of the Auchterarder sweet shop had done sterling service over the Christmas period.
- d) Margaret Tattersfield showed a radio remote control all-terrain vehicle purchased from Tim Edwards at the last meeting.
- e) Bert Hutchings reported that Jim Gamble was disposing of early Meccano Magazines on eBay. These often reached £40 and a MM No 1 had recently gone for £112. General amazement was expressed at these prices.
- f) Angus Plumb had been to an auction in Montrose and bought, *inter alia*, a brand new 1970s 7x set (or a 6a in real money) and Magic Motor, a PDU motor, a nickel clockwork motor and spring (the spring unfortunately having become separated from the motor), some other nickel parts in good condition, Meccano tubes of grease and a pulley wheel with tunnel keyway.
- g) Alistair Nicoll reported that he is working on a 1:48 scale model of the hammerhead crane at Clydebank (Andy Knox is also building a model of the similar crane at Stobcross). After obtaining a drawing of the crane he had worked out that the boom alone would be five feet long at this scale. Alistair described the problems involved in making a bearing suitable for a boom of this size and weight and showed a prototype. Several members were of the strong opinion that some sort of clutch mechanism should be incorporated. Alistair asked if rotational and lifting speeds should also be scaled down. Andy Knox stated that this was not necessary and general opinion was that whatever looked good was acceptable.
- h) Andy Knox asked if the Stephenson's Rocket model sold by Marks and Spencer in recent years contained 3" spoked wheels. This was confirmed and members stated that these were very difficult to obtain separately. Andy also asked if any members were familiar with the intricacies of Stephenson valve gear. Members present were unable to assist.
- i) Douglas Carson had obtained a couple of Meccano stamped parts he thought were unusual. One was positively identified as a bush wheel with two holes from a Mechanised Army Set and the other was thought to be a mutilated gear wheel from which the teeth had been carefully removed.

Douglas Carson, Secretary

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SOCIETY MEETING, 28th March 2010

The meeting was held in the Smith Art Gallery and Museum, Stirling at 14:00 hours. Members present were Jim Berrie (Hon. President), Douglas Carson (Secretary), Andy Knox, Margaret Tattersfield, Bert Hutchings, Desmond Smith & guide, Angus Plumb, Jim Gregory, Jackie Inglis, Alistair Nicoll (Newsletter Editor), Tim Edwards (Webmaster), Ken McDonald, Robert Jones, Bill Jack & Gordon Stewart. Apologies were received from Alan Macdonald (Treasurer), Gordon McMillan, Alan Blair, Bobby Middlemass & Angela Goodlet.

1. Intimations: the Secretary reported that:

- c) Alan Blair has recently had a heart valve replacement operation and is recuperating at home. Members present wished Alan all the best for a speedy recovery.
- d) The late Dick Martin's Meccano will be sold by auction on Thursday, 15 April at 5:00pm at the Edinburgh & Borders Auction Centre, Edinburgh EH24 9AL (0131 440 2448). Viewing is from 10.00am on the day of the auction.
- e) Some of Dick Martin's Meccano literature had been donated to the Society. It was agreed that members present who wished to take any of this literature should make a small donation to club funds.

2. Correspondence: the Secretary reported the following correspondence:

- d) An invitation had been received from the International Society of Meccanomen (ISM) to nominate persons for the Golden Spanner Award.
- e) Rob Mitchell, Chairman of the Sheffield Meccano Guild, had rejoined the Society. Rob is well known in the Meccano world as Assistant Editor of Constructor Quarterly and is a first class Meccano modeller. Members expressed their pleasure at Rob's decision to rejoin the Society. As subscriptions are due in November, the Secretary had informed Rob that he could have the remainder of this year's membership *gratis*. Rob had also informed the Secretary that he intends to enter this year's Menstrie competition.
- f) An invitation from the Scottish Traction Engine Society to once again exhibit at their 'Steam in the Park' event at Balado. The Secretary had responded confirming our attendance.

3. Treasurer: The Secretary reported on behalf of the Treasurer that the Society's insurance policy had been renewed.

4. Newsletter: The Newsletter editor reported that the next edition of the Newsletter was ready and awaited only the Secretary's minutes of this meeting. He also stated that he had been studying the rules for the Menstrie competition and proposed that the restriction to Meccano parts should not apply to driving bands because these were no longer readily available. After discussion it was agreed to accept this proposal and the phrase "except for driving bands" be inserted in the appropriate place in the Rules. The revised rules will be published in the next Newsletter and updated on the website.

5. Exhibitions (Future):

- e) Steam in the Park, Balado, 8/9 May 2010. Our invitation to this event is now confirmed by the organisers, who had spoken warmly of their desire that we should

continue to exhibit. The Secretary invited those members present who had not already done so to state their intention to attend or not. This confirmed that we should manage to fill between 10 and 12 tables. The Secretary will inform the organisers of our requirements and arrange distribution of vehicle passes to the site. Participants were reminded of the need to bring their own chairs.

- f) Farming Yesteryear and MSS Annual Exhibition, Scone, 11/12 September 2010.
- g) Cathcart, 30/31 October 2010.
- h) Greenock, 6/7 November 2010.

6. Inverness Science Festival: The Secretary had been in further contact with Ms Tracy Tamijmarane of Inverness College who is organising this event.

Ms Tamijmarane had suggested a “qualifying” round of the schools building competition to run through May, the winners to proceed to the Masterclass and the building competition proper in June. The Secretary had a number of concerns about this proposal and these were supported by members. It was agreed that the Secretary should not concur with this proposal and we should stick to the original format.

The Secretary reported that Ms Tamijmarane would purchase prizes of current Meccano sets to be given to the winners and other participants, and that she had agreed to the payment of mileage expenses. It was thought the standard education department mileage rate would not be overly generous but this remains to be seen.

We had been asked to state the maximum number of kits (including M0 motor and battery holder) we could supply. Bert Hutchings and Jim Berrie agreed that twelve was the best they could do. Bert had considered the contents of these kits and suggested that a No 4 set would be a better basis as it included four road wheels. It was agreed that Bert should use this as his template although there is no requirement to reproduce an exact replica of a No 4 set. It was also agreed that the organisers should be responsible for providing driving bands (e.g. elastic bands) and batteries. The Secretary stated that Ms Tamijmarane had agreed to reimburse the society for any loss of parts, each complete kit being worth about £30. This is a “return or sale” basis.

The first part of the event, a “Meccano Masterclass”, will take place in the afternoon of Friday, 4 June in Inverness. This will be delivered by the Secretary and Margaret Tattersfield. Kits will be distributed to those taking part at this point and it was agreed that the Secretary will take possession of these at Balado in May.

The second part of the event, a public MSS Meccano exhibition in Inverness, will take place on Saturday, 26 June. The exhibition will also include hands-on construction and the award of prizes to schools in a Monster Meccano Building Competition, the winners to be judged by the Society. The Secretary agreed to provide all necessary parts for the public building part of the exhibition. In addition to the Secretary, Angus Plumb, Gordon Stewart and Margaret Tattersfield agreed to exhibit models. It is hoped that other members located in the North East will also be willing and able to participate. Angus stated that he had been in contact with Mr Keith Remnant, who has displayed Meccano in the North East of Scotland, concerning this event. It was agreed that if Mr Remnant wished to participate under the Society’s auspices then he should be asked to first join the Society. Angus agreed to convey this to Mr Remnant.

7. Dates of Future Meetings: These are Saturday 22 May at Menstrie Scout Hall, Sundays 22 August and 21 November.

8. Other business:

- j) Desmond Smith showed his prototype entry for the Menstrie competition. Members were interested to see how fast the model went, in order to gauge the competition they would face. Desmond also showed a Meccano Combat Construction Kit and a boxed French No 0 set in blue/gold. The No 0 set was alleged to be from 1968 and discussion followed about when the French factory had ceased production of this colour scheme. It was thought that was sometime in the 1960s but members were unsure as to the precise year. It was agreed that the price Desmond had paid for this set was not unreasonable.
- k) Gordon Stewart had a die cast model of a delivery van bearing Meccano Magazine advertising. This was a limited edition model.
- l) Andy Knox had obtained cord very similar to Meccano cord through an eBay supplier¹. Andy also showed a very clever set of epicyclic planetary gears which produced a ratio of 1:6 12/13. i.e. one to six and twelve thirteenths (or 1:7 as near as makes no difference to the Secretary).
- m) Jim Gregory showed a smaller version of his rotating aeroplanes model. Each of the four planes was different, representing types used by Mission Aviation Fellowship. This model may in the future feature in the window of the Auchterarder sweet shop.
- n) Jim Berrie had been clearing out various pieces of Meccano and Erector which he generously gave to members. Jim also showed an ingenious model that used four M0 motors, connected in series, as hand cranked generators that powered a fifth M0 motor driving a small windmill. Finally, Jim produced copies of the Society's constitution that had been distributed with the December 1990 Newsletter.
- o) Tim Edwards announced that he had a quantity of plastic Junior Meccano for sale. Contact Tim if you are interested. Tim also stated that the indexing of Meccano Manuals 1937-81 was very nearly complete.
- p) Douglas Carson summarised a February 2010 press release on the Meccano web site² announcing a deal between Meccano and Helix Films of Los Angeles to "develop a 3D feature film based upon the Erector Set brand of children's construction toys. Helix is currently developing an original script with an eye towards creating a film franchise based on the Erector brand that could also expand to other entertainment platforms including television and video games." Douglas believed that, if successful, this could be an enormous boost to the Meccano hobby.

9. Dick Martin's Meccano Literature: This included model plans, old Society Newsletters, parts listings, Meccano Manuals & Merkur literature. The Newsletters will be returned to the Treasurer. Members present donated £41 to Society funds in respect of the items they took away.

Douglas Carson, Secretary

¹ http://myworld.ebay.co.uk/k2-accessories_07/ Click on "Items for sale" and then type "waxed cotton" in the search box. String of 1mm, 1.5mm & 2mm diameter is available, in a bewildering range of colours. The cord Andy brought to the meeting is "Cobalt Blue 1mm". Caveat: some items come as a set of 10m lengths rather than a single length.

² <http://www.meccano.com/news/>

OUR NEW PRESIDENT AND THE SOCIETY'S CONSTITUTION

In our last issue it was reported in Secretary's Notes that Jim Berrie had agreed to accept the position of President of the Meccano Society of Scotland. At the time of publication we regrettably did not have to hand a photograph of the new appointee who, being a shy, retiring, and somewhat inconspicuous figure may not be familiar to members.

We are happy to correct that omission now with the picture below showing Jim on the day of his appointment wearing the President's medal of office.



James Berrie President of the Meccano Society of Scotland

At the April meeting of the Society Jim brought along copies of the constitution of the Society and it is appended below. It is clear and succinct document which says all that needs to be said in order to establish a properly organised and efficiently run voluntary body. However, we are not observing the "letter of the law" and some articles are a bit dated. This is discussed in more detail in Secretary's Notes (q.v.)

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MECCANO SOCIETY OF SCOTLAND

Established August 1984

CONSTITUTION

1. The object of the Society will be to foster interest in the Meccano system of model building.
2. Membership of the Society will be open to any person interested in Meccano.
3. The Society will affiliate to the Guild of Meccano Clubs UK.
4. The Society will operate by holding meetings, publishing a newsletter and providing Meccano displays at exhibitions and other venues.
5. Membership of the Society will consist of honorary members, members, and junior members (age under 16).
6. Executive office bearers of the Society will be comprised of Chairman, Secretary, Treasurer and Newsletter Editor, all of whom will be re-elected annually.
7. An annual general meeting will be held, for the presentation of accounts and election of officers. A quorum for the A.G.M. will comprise the Chairman, Secretary, Treasurer and five other members.
8. A President will be appointed by the Society, in a non-executive and honorary role, this appointment to continue until rescinded by the annual general meeting or by resignation of the incumbent.
9. The constitution may only be amended at the annual general meeting by a two-thirds majority of those present. Motions for any amendment to the constitution shall be published in the Society's Newsletter prior to the annual general meeting.
10. Accounts will be prepared and audited annually.
11. Society affairs in general will be regulated by decisions taken at meetings which are open to all members.
12. In the event of the Society being wound up, its funds will be donated to a charity nominated by the remaining paid-up members.

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SECRETARY'S NOTES

As I write these notes in the last week of March, winter has returned with a vengeance with significant falls of snow in many parts of Scotland. However, I hope we are all coming out of hibernation because the Meccano 'season' will shortly be upon us.

Details of forthcoming events can be found in the Minutes of Meetings. However, I would like to highlight our annual constructors' day at Menstrie in May which includes our annual competition. I know of at least one entry coming from south of the border, so I hope our own members will rise to the challenge.

This is a great opportunity to chat informally with fellow members, ask questions, and show your latest work, either complete or in progress. Bert Hutchings will no doubt be delighted to sell you yet more Meccano. It is not necessary to attend the whole day, but lunch is provided and the competition will be held at 13:30 hours, followed by a Society meeting. Doors open at 10:00.

At our last meeting our Honorary President, Jim Berrie, distributed copies of the Society's constitution as distributed with the December 1990 Newsletter. On reading this constitution it is remarkable how closely we have adhered to it in the intervening twenty years. However, there are a few points which we will need to address.

1. The constitution calls for an executive of Chairman, Secretary, Treasurer and Newsletter Editor. Well, we have the latter three, but we don't have a Chairman; the Secretary has combined his role with the Chairman's in recent years.
2. We should have an Annual General Meeting for the presentation of accounts and election of office bearers. Current practice is to present the accounts at the November meeting, so I suppose this is the *de facto* AGM.
3. We are required to affiliate to the Guild of Meccano Clubs UK. Does this organisation still exist?

I would be grateful if members could think about these points and in particular about the office bearers. We will have a discussion at our meeting in Menstrie. If you cannot attend this meeting, then please feel free to contact me if you have any views you would like me to air on your behalf.

Douglas J Carson, Secretary

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OBITUARIES

Richard Martin

Dick Martin aged 78 and a resident of Falkirk was an HGV driver for Scottish Gas. For most of his adult years he was an enthusiastic “biker” to the extent that his fellow bikers called him “Dick of the 100 bikes” because of his activity in buying selling and rebuilding motor bikes.

In his later years he took up his hobby of Meccano collecting and model building and exhibited at shows and exhibitions, being among the prize winners at Scone.

Jim Berrie, Alan Blair and Alan MacDonald attended the funeral service at Falkirk Crematorium on 18th December 2009.

Jim Berrie

David Lawrence

David – an Englishman abroad – lived in the USA, although he frequently visited the UK. He became a member of the Meccano Society of Scotland and was an enthusiastic participant in the annual Menstrie Challenge, sending over – at great expense - models to be operated by proxy mechanics. His models always performed well and one year he achieved second place. MSS was not the only Meccano club favoured with David’s entries in to competition but we seemed to be his favourite. He wrote one or two articles for the Newsletter and corresponded with the editor making favourable comments on our activities. He died late last year after a long period of ill health.

Alistair Nicoll

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CAR ACCESS TO STIRLING SMITH ART GALLERY

Alan MacDonald recently received a letter from the Director of the museum regarding the car park access. Apparently they have been having trouble with people who work in the area using the Smith’s Museum car park as a free parking for the day. This has led to the car park being unavailable on occasion for visitors. They have therefore installed a barrier which rises on approach. To leave the car park you need to obtain a token from reception and insert in a box in the car park. The barrier will then rise to allow one car to leave.

While the free parking by local business people presumably does not happen on Sundays, this system remains in place and therefore affects all those attending Society meetings. It was in place for the meeting on March 28th and no problems were encountered. If you have not used the system before just remember that the barrier will rise as you drive towards it!

* * * * *

THE MENSTRIE CHALLENGE 2010 - RULES

We hope that there will be a good turn out of members at Menstrie this year and that they will all bring along a model it can be partly constructed or complete it does not matter. The original concept of the “Constructor’s Day” as it was called was that we could swap ideas and assist each other with problems that we were encountering in our model building. Of course we now have the added attraction of the Menstrie Challenge – our annual competition. These were printed in the last edition of the newsletter but have been amended slightly following upon discussion at the April Society meeting. The rules with the amendment in italics are appended below.

1. The competition this year is to build a four wheeled vehicle to sprint in the fastest time between two lines 18ft apart on the Menstrie Scout Hall smooth wooden floor. Note that all four wheels must remain in contact with the ground throughout the run.
2. The only power is to be one Meccano Magic Motor. No gravity, elastic or other assistance is permitted.
3. Only Meccano or Meccano compatible parts to be used *with the sole exception of flexible driving bands.*
4. The entrants name must be prominently displayed and be visible from above (e.g. a sticky label). This is to assist commentators, scorers, and reporters writing up the event.
5. Entrants may enter more than one vehicle.
6. Practising between the floor lines will be permitted during the early course of the meeting but each sprint heat for real will be run only once, about noon.
7. The race starts with the nose of each vehicle on the first line and finish with the noses crossing the second line.
8. At the start of each race the competitors will hold their vehicles stationary with the motor engaged until the starting gun goes off.
9. Vehicles will have to run reasonably straight to avoid colliding with each other. There shall be no contact with vehicle after it has started. Vehicles deviating from the straight and hindering the progress of others will be disqualified.
10. The competition will be run on the league system with competitors racing against each other in pairs.
11. In the event of a dispute the Secretary will arbitrate.
12. Proxy entrants welcome.

* * * * *

SIMPLE MECCANO TORQUE LIMITERS

by

Andrew Knox

A discussion at a recent MSS meeting centred on the need for torque limiters to be fitted at the appropriate points in larger models. Forced movement when on display, or models which have high inertia, may cause damage to drive train components if the rotating parts unintentionally slip on their shafts. Typical examples include rotating the boom on a large crane and starting / stopping a model containing a large flywheel. The purpose of the torque limiter or overload clutch is to provide a “weak link” that can accommodate slippage without being damaged and yet be invisible to normal model operation.

Many ingenious and elegant designs for such a component have been published over the years. However, the relatively recently introduced small parts from the modern kits allow the construction of very compact limiters. In the following three examples the limiters are intended to be used in-line, requiring a short length of rod to achieve the desired function.



Figure 1 – “Exploded” views of each of the mechanisms.

The first device uses a socket coupling with a 3/8” rubber pulley or collar (part 23c) providing the mechanical compliance. Figure 1 shows a 1” pinion held in one end of a socket coupling. A rubber collar is fitted in the other end of the coupling and when a rod is passed through it

the collar expands sufficiently to provide a modest amount of friction between the coupling and the rod. A brass collar is fixed above the drive pinion to prevent axial movement of the rod when slippage occurs. When slipping, the rubber collar tends to remain stationary in the coupling and the rod moves relative to it.

The second device provides a higher torque transmission before slip occurs. As before, drive is transmitted to a socket coupling, in this case via a helical gear. For this implementation a small flanged wheel is secured in the free end of the coupling and one of the beads of a $\frac{3}{4}$ " tyre from a Design 2 kit (part A384 / 0142j) is placed over it. This tyre is wider than the cylindrical part of the flanged wheel and hence a second flanged wheel may be fitted to the opposite tyre bead. The second flanged wheel is secured to the rod, thus transmitting drive to the large toothed pinion, shown on the right in Figure 1.

The third device provides a torque limit close to what can comfortably be handled by Meccano gears. As previously, drive is transmitted to a socket coupling, this time via a large bevel gear. Separately, a 3 hole coupling is secured to the rod using several grub screws and a $\frac{1}{2}$ " tyre is then placed on the coupling. This tyre comes as part of the Maxi excavator kit (840708B; can often be picked up on eBay for 99p.) A sleeve piece is then fitted over the tyre and 3 hole coupling and secured to the socket coupling using the black bolts shown in the photo. Ensure these bolts don't pinch the rod. Optionally, a small flanged wheel can be fitted over the sleeve piece (this may be quite difficult) to further compress the $\frac{1}{2}$ " rubber tyre if so desired, thereby raising the normal force between the sleeve piece and 3 hole coupling and hence increasing the torque that can be applied before slippage occurs. This flanged wheel should not be fixed to the output shaft which carries the 1" sprocket.

* * * * *

MECCANO ON THE INTERNET

Spanner witters on with lots of multiple postings (it is quite common to get five or six postings consecutively from one contributor). However they are not talking about anything very interesting – to this reviewer at least.

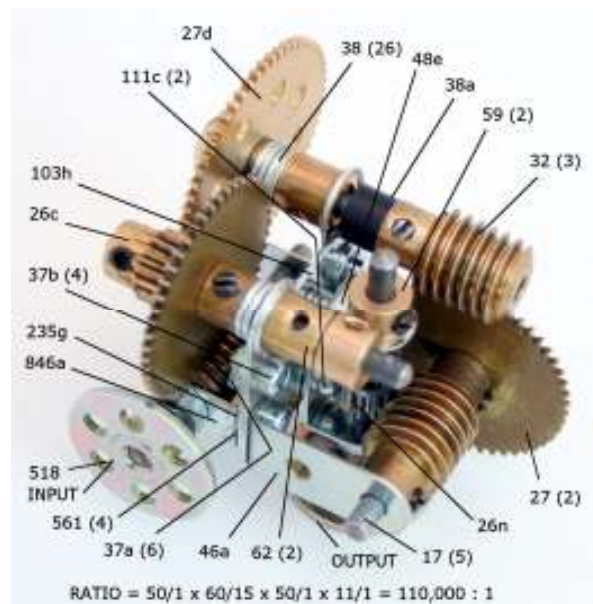
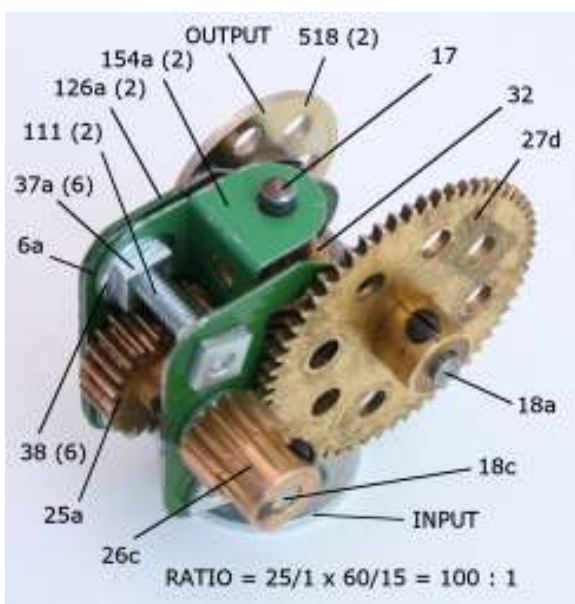
Although., come to think of it, a certain amount of correspondence centred around the odd

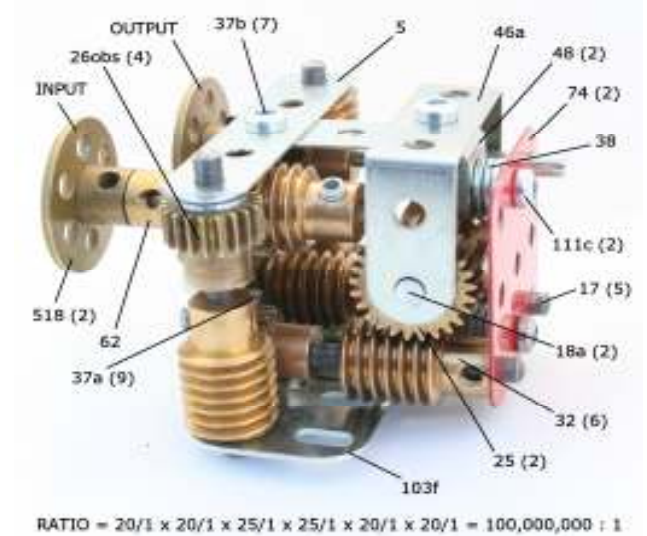
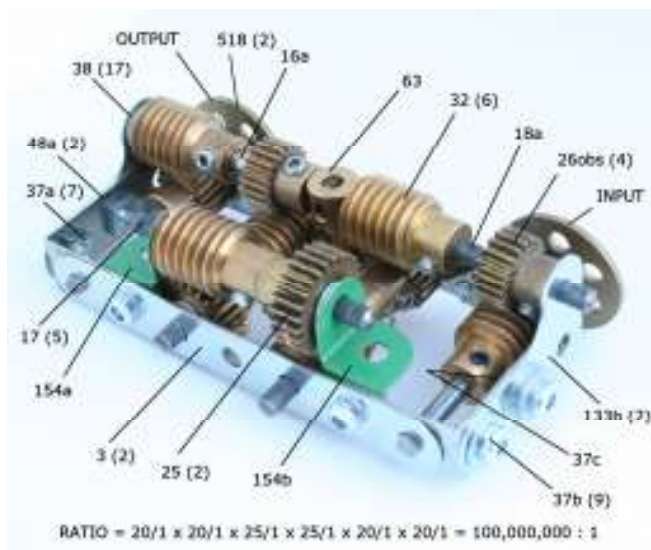
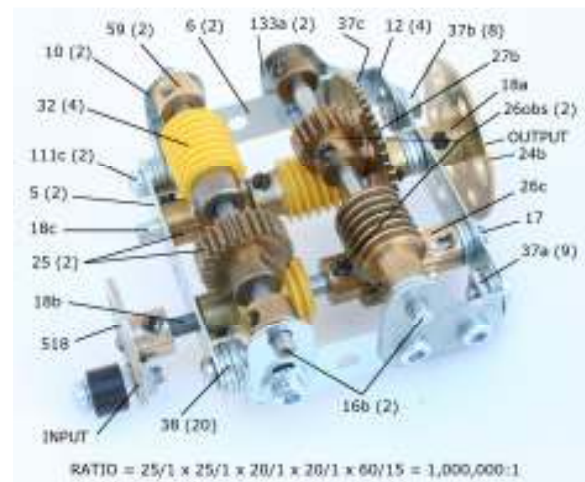
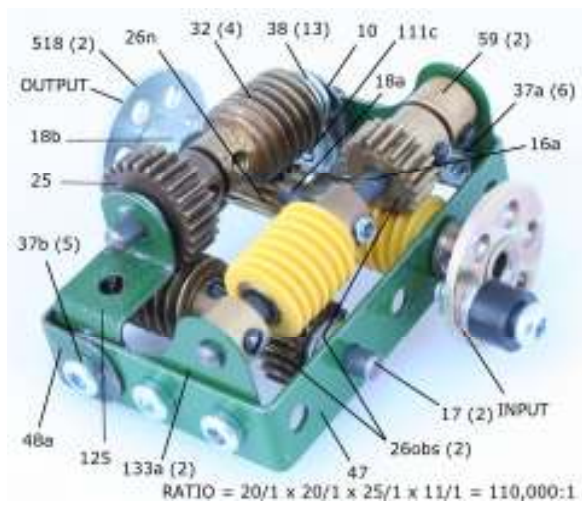


Argentinian chocolate 'Mecano'

concept of chocolate Meccano. This was an April fool joke, which completely took in one writer who reported that, while he had not seen any chocolate Meccano, a cake with marzipan Meccano pieces on top had been produced for some club celebration. Both the April fool joker and the marzipan Meccano man were, however trumped by the correspondent who produced photographs of the real thing, produced in Patagonia but spelt wrongly.

One gem covering the real thing did emerge, with a direction to the SELMEC site and a contribution thereon by Alan Wembourne in response to a competition set by ISM regarding the design of high reduction, small volume gear boxes made from Meccano. Only the pictures (reproduced below) are provided but with a parts list handy and lots of time for reflection presumably experienced Meccanomen can work out how each one works.





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