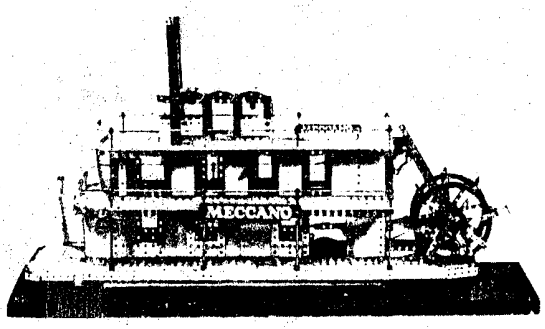
SMG NEWS



THE SHEFFIELD MECCANO GUILD

DECEMBER 1989

No. 28

Hi folks!

This edition was produced on electric typewriters. We hope you appreciate the improvement in reproduction quality.

IN A PACKED PROGRAM TONIGHT.....we have a 'syndicated' contribution from Paul Joachim on the subject of scale modelling in Meccano; a very well written and thought provoking piece.

The model feature is once again by Ernest Palmer, and it's another Grasshopper engine. Rob has built the model, and finds it to have a most pleasing action. Also to be found are details of Michael Whiting's Martian Orrery.

Kelham Island Industrial Museum is once more in our thoughts as we consider next year's exhibition. Details of exhibition and meeting dates (we are having THREE meetings next year- see the AGM notes) are on the back page as usual, but your attention is also directed to the article reprinted from the 'Star' newspaper concerning tourism in Sheffield. Considering the shoddy way we were treated at Kelham last time round, I feel this article may be relevant.

Complements of the season to you all...and enjoy the Newsletter!

MIKE AND ROB

ANNUAL GENERAL MEETING, 14th October, 1989

The Guild officers were even more exposed than usual to the possibility of things more solid than abuse being hurled at them, since we were unable to find a table which was not covered with Meccano. However, the members took pity on us since it was our first AGM.

After an introduction by Charles, Steven presented the accounts for the Guild, in a very clear and understandable form. These being accepted by the members, discussion arose, concerning possible uses for the £180 in the Guild account, based onthe understanding that at present membership levels, a £50 pa surplus could be expected.

Suggestions made, based on previous duscussions, were: another Guild Award; a modelling prize consisting of Meccano parts; or a third Guild meeting.

After putting the matter to a vote, the idea of a third meeting was accepted by a comfortable majority.

Meeting dates were then discussed, with particualr care to avoid clashing with other Meccano club meetings and events.

The topic then arose from the floor of Guild meetings on a Sunday, this being seen as having the advantages of quietest roads and a lower likelihood of clashing with other events. Objections put forward concerned observation of the Sabbath, and the shortage of public transport on a Sunday.Aproposal to hold a Sunday meeting was defeated by an approx two thirds majority when put ot the vote.

The next subject to be broached was a 'post mortem' on the Kelham Island exhibition. It was seen by the members that poor attendance was largely due to the exceptional weather, and the suggestion was put forward for discussion that the exhibition should be held earlier in the year; especially since the museum staff have said that museum attendance in general was greater in poor weather. A date of 17th/18th MArch was finally agreed upon.

Further points which arose from the floor concerning Kelham Isalnd concerned publicity, both for the exhibition and for the museum in general. Charles pointed out that the 'Star' newspaper had carried an article mentioning the exhibition; also that the exhibition had been reported on Radio Sheffield. However, the point was accepted that more could be done in future. Concerning the museum itself, even people in Sheffield did not always know where the place was; it seemed to hide itself away. The Secretary understood this, and undertook to produce some form of publicity material to distribute to other Meccano guilds.

After a statement from Charles concerning an undertaking to take part in the Sheffield bus Museum open days next year once more, Any Other Business brought a criticism or two of the failure on the part of the Secretary to clarify the change in the meeting date, which was originally to be held earlier in the month. Although compunded by a printing fault in the Newsletter Diary Dates, the Secretary apologised for his error, brought about by his failure to send an amendment to the list published in the MW newssheet and elsewhere.

There being no other business to report, the members returned to the more important matters, such as talking about Meccano, drinking tea, and what have you.

MODEL REPORT-Norton Church Hall, 14th. October '89

Meccanomen arrived from places as far away as Pickering, Derby and Grimsby to attend the SMG's Autumn meeting, and everybody seemed to have a good time. Here is a rundown of what (and who) could be seen:-

DAVE PENNEY showed his version of Mike Brammer's Milling Machine, built from instructions in SMGM no.22 & CQ nos. 1&2, neatly turned out in red & green Meccano.

JOHN MACDONALD arrived early as usual with his red & green model of the 1938 Auto Union Racing Car. This veritable masterpiece of mechanisms and plate bending sported a V12 rear mounted engine, a 3-speed and reverse gearbox, clutch, DeDion rear suspension and trailing link front suspension.

ALAN GRIMSHAW brought his model of a 16-horse galloper, also constructed in red & green parts. Movement was provided by a PDU, and the model also featured lighting.

JOHN BADER came to Norton with a Super Meccanograph from CQ no.2, in blue, yellow, & zinc parts. John, obviously an avid reader of CQ, had built the Hydraulic Access Platform (no.5) and the South Seeking Chariot (no.3). John's son, Jonathan, brought his version of a Field Gun from the Army Multikit manual.

GEOFF TOMLINSON has a talent for building Traction Engines, and he brought THREE to prove it. All constructed in red & green parts, two Showman's Traction Engines, one to 2" and the other to 1½" to the foot scale, and an Agricultural Engine were to be seen, as well as the SML Pontoon Crane turned out in Nickel Meccano.

RUSSELL CARR eventually arrived at Norton after his train was late and he missed a lift, but he did bring a 10-set Lifting Shovel in blue, yellow, & zinc parts. Russell has made this model not only look good, but also work well, AND be 90% kidproof- not bad for a 10-set model!

MICHAEL WHITING both seduced and defeated most modeller's knowledge on gear ratios with his three orreries. The first featured the Sun and the 9 planets of the Solar System, with the planets both in orbit and rotating on their own axes, built in blue & silver parts. The second showed Neptune and it's eight moons, 6 of which were discovered by Voyager II, and the third is a 'beginner's orrery' showing Mars and it's two moons, Phobos & Diemos, hand driven.

RICHARD KENT brought a selection of small models built from yellow & black Meccano. They were a Gantry Crane, a fork-lift truck, a flat-backed lorry, a single cylinder oscillating vertical steam engine, a racing car, and a motor scooter.

LES GINES also brought a red & green model in the shape of a roundabout driven by a PDU. An automatic sequencing mechanism made it start and stop every two minutes.

JOHN MARTIN showed a red-green removal lorry from a pre- & post-war no.6 outfit, his 6" built-up GRB, and a mint Nickel crane from the 1913 manual.

MIKE COTTERILL brought <u>two</u> Ball Bearing Bouncers; both Mike Cuff's original and his own version. Now you can watch it in stereo!! Mike also brought his 'Meccano Show' advertising tower, powered both by a mains motor and several Meccano men who appeared to be working to rule.

ALAN PARTRIDGE fetched an improved rebuild of the 'MM' Matterhorn Bobsleds, constructed of yet more red & green Meccano.(where does it all come from?)

ROY EVERITT arrived with a red & green High-Speed Electric Train, powered by a 12V motor driving the loco's bogies from an overhead wire and pantograph.

FRANK SINGLETON took a break from producing designing machines, and built a single-crank two shaft mechanism in dark blue & yellow parts. Frank says that it is a solution looking for a problem.

PETER MASON showed the beginnings of an Automated Ship Coaler built in yellow & zinc parts. No doubt it will be completed to a very high standard.

CHARLES HATFIELD has been busy building a model of the Burgh Island Sea Tractor, constructed from his own photos, in red, yellow & blue parts. Charles also showed his Eiffel Tower & Tower Bridge, both of which are soon destined for the great scrapyard in the sky.

MIKE BEADMAN gave another airing of his pair of 'ancient & modern' aeroplanes- the Biplane and F16 Fighter. Mike also showed Robin Lake's clockwork 'Cum-Bak' from CQ no.4.

FRANK GRANT fetched a pair of models in red, green & yellow Meccano. One was a Kientz Oscillating Engine, and the other an Automatic Helter-Skelter, with a lift moving balls from the bottom to the top of the spiral.

ROB MITCHELL brought a selection of models which included a 6-legged 'bug' (CQ no.5), a mountain-climbing tracked Mamod ('Steamerpillar'), and an automatic lego (sorry) bashing machine which bashes, whacks, thumps and hammers the moulded menace. Powered by five motors, it contains 22 machines, including a rack railway, drop hammer, screen and a vicious hammer mill.

ROBIN SCHOOLAR showed his Henley Prize-winning 'Handiman' Access Platform in all yellow parts, powered by four MO motors which gives independent control to traverse and the three boom sections. The bottom section is operated by a theaded rod, the upper two by pulleys, cords, large gear ratios, and brute force.

NEMS DARLINGTON EXHIBITION 1989

On arrival at the Arts Centre in Darlington, Frank Beadle warned us that space would be at a premium. And so it came to pass, as modellers from as far afield as Holland, Aberdeen, Norfolk and Maltby(!) flooded in with Meccano creations of all descriptions.

Here is a selection of what was on view;

The Meccano Society of Scotland's display included an enormous lorry mounted crane which sported a four section teles-copic jib of some six feet in length at full extension, easily luffed by a simulated hydraulic ram built up from boilers.

Nearby was a rotating aeroplanes model, in which the 'planes, each driven by its own motor and fan, climbed, dived, banked and bombed via a complex sun and planet pair and gimbal arrangement.

On the same line of tables was an immaculate blue and zinc Giant Blocksetter. And providing the music was a Meccano Group with cymbals clashing, feet tapping, and a keyboard player going completely doolalley, and all within 12½" square!

First prize winning junior model was a Ball Bearing Confuser, in which a ball was made to negotiate a tortuous circuit of ramps, chutes and lifts. How about some mechanised Origami? AA complex paper folding machine, which produced concertinas from two one inch wide strips of paper wound on reels, the whole thing operated by a complicated sequencing device.

One modeller came, not by Rolls-Royce, but with a Rolls-Royce, a beautiful yellow and zinc example of a vintage Roller.

The exhibition was very well attended by the visiting public, who clearly appreciated what they saw. A video was also produced, and will probably be released later on, to embarass everybody on it!

MECCANO GRASSHOPPER ENGINE -by Ernest Palmer (Somerset)

Following the success of Ernest's first Grasshopper Engine, he has now submitted a larger version, complete with a set of photographs.

This model was built straight from a 'Model Engineer' front cover illustration; the proportions and size of the model being decided by the fact that the base was going to consist of the yellow plastic Meccano box, with its flanged metal cover from a French 'B' Meccano set of 1982 era. Without this plastic box and its cover, one would have to build up a rectangular base 12½"x4½"x2", (or 2½"), the 2" or 2½" depth of base depending on whether braced girders or flexible plates are available. The top surface would consist of rigid plates or supported flexible plates.

The engine is supported on two pairs of 12½" angle girders arranged as Fig.1. with the round holes in the vertical position. It will probably be easier to build the engine on these angle angle girders BEFORE bolting them to the top surface of the aforementioned base.

The cylinder consists of four vertical 3½"x2½" and two horizontal 4½"x2½" flexible plates to form a cylinder 3½" tall and 2½" diameter. Inside are two 2½"x½" double angle strips to maintain a concentric shape. Outside at each quarter are 3½" vertical narrow strips to add stiffness and appearance.

The top of the cylinder consists of two semi-circular plates bolted to form a disc between a 2½"x½" double angle strip and a 2½"x1½" flanged plate on the outside. On to each of these upturned flanges is bolted another semi-circular plate, which in turn have two 3½" strips to form a vertical triangle. The 2½"x½" double angle strip is bolted across the inside top of the cylinder. It would be a good idea to tighten the bolts and nuts in this assembly, whilst a 3" axle rod is passed through the free ends of the 3½" strips and held in place by four spring clips or collars.

The cylinder is bolted to a 3½"x2½" flanged plate by angle brackets, and the plate has 3½"x½" double angle strips bolted to its flanges to form vertical sides; these same bolts also have internal ½" angle brackets to attach the assembly to the angle girders mentioned earlier, ½" from the end. Half inch in from the other end of the angle girders, is fixed a 2½" strip, this being the lower pivot of the beam support column.

The column consists of two 7½" strips bolted together, but spaced apart by three ¾" bolts as in Fig.2, and the bolt in the centre hole anchors one end of a tension spring. One end of the column is pivotted on a 2" axle rod in the 1½"x½" double angle strip with spring clips or collars to keep the column centrally located. At the top end of the column, a fourth ¾" bolt acts as a pivot for the beam.

The beam is a 7½" strip sandwiched between two 4½" strips, overlapped three holes as in Fig.3. It is pivotted at the 2nd. hole from the double thickness end. The other end of the 7½" strip can be temporarily put onto the 3" axle rod above the cylinder. At the end hole of the double thickness part of the beam, two flat brackets are bolted, but free to pivot. Between the lower end of these flat brackets is bolted the free end of the spring already anchored at the mid-point of the column.

The outline of the engine is now in a rectangular form, with the 12½" angle girders forming a temporary base, the cylinder and superstructure at the left-hand end, the beam forming the top, and the column being the right-hand end. On the far side angle girder, at the third and fifth hole from the 3½"x2½" flanged plate, a trunnion is attached with its foot on the underside of the angle girder. At the second hole to the right of the trunnion, a channel bearing is bolted to the vertical side of the angle girders. Now we can bolt the angle girders to the box-lid flanged plate or made-up base.

The outer end of the crankshaft is supported in a flat trunnion bolted to a girder bracket (2"x1"x½") if using a box lid, or short angle girder on a

built-up base. On the other side of the channel bearing, a double bent strip is bolted to the lower angle girder slotted hole face and box lid orbase. The crankshaft is a 3" or 3½ axle rod with a crank at the trunnion end. Between the trunnion and flat trunnion is a fixed 1" pulley and large bevel (or contrate) gear. A medium sized driving band is also put on this shaft before passing through the flat trunnion. Outside this flat trunnion the crankshaft carries a bush wheel attached to a 5½" hub disc, and a flywheel. Three curved strips are clamped by a flat bracket to the inside of the hub disc. These are only to approximately counterbalance the crank and connecting rod, not the beam, etc.

A 1½" axle rod passed through the channel bearing carries a small bevel (or pinion) on one end, and a ½" pinion on the other end. The latter drives a small contrate gear on a 3½" vertical axle rod that has a small fork and two collars, forming a governer, at one end. Below the contrate gear is a collar supported on the double bent strip, with another collar under the box lid or base top.

Two 1½" angle girders each support a 1½" square plate; one of the latter has an angle bracket at the top to carry a 1½"x½" double angle strip. This little assembly is placed on the centre line between the main frame angle girders to form the pump. The pump rod (6½") is suspended from the beam by a small fork piece bolted loosely in the centre hole of the three hole overlap joint.

The crankshaft connecting rod is another 6½" axle rod fitted with rod/strip connectors at each end, suspended from the beam at the eigth hole from the piston end of the beam. At the tenth hole from the piston end of the beam, there is a 1" axle rod with handrail couplings at each end, equispaced with washers. Into the spherical portion of these couplings is fixed one end of 4½" axle rods. At the other ends of these rods are rod couplings. Now remove the 3" axle rod from the top of the cylinder assembly, and put the couplings onto pivot bolts lock-nutted to the ends of the 3½" strips, the couplings being free to move on the inside of the cylinder superstructure.

The piston rod is a 4½" axle rod connected to the end of the beam by a rod/strip connector. If the piston rod fouls the 2½"x½" double angle strip inside the cylinder, the rod can be replaced by a drift (point downwards). More advanced builders could add valve operating gear from one of the rocking couplings.

Finally the motor is fixed to the underside of the box lid, or made-up base. I used the Powerdrive motor with 6-speed gearbox, the driving band being pushed through a Meccano hole to form a figure '8' to the pulley on the motor shaft. Due to the length of the motor unit, the front flange of the box lid will have to stay on the inside of the box, the other three flanges fit outside the box.

Fig. 1

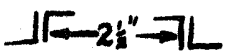


Fig. 2

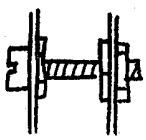
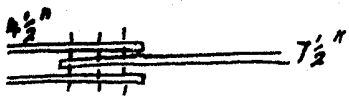
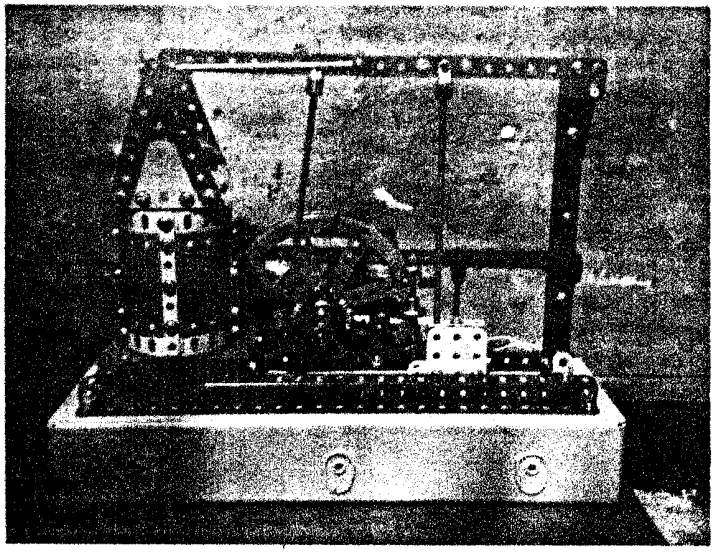


Fig. 3



KEY TO PHOTOS

1..General view of grasshopper engine
2..Plan view of cylinder end of engine
3..Crankshaft, governer and pump
4..Another steam orientated model from Ernest; this time it is a 1929 steam engine on a plinth to celebrate its 60th. anniversary.



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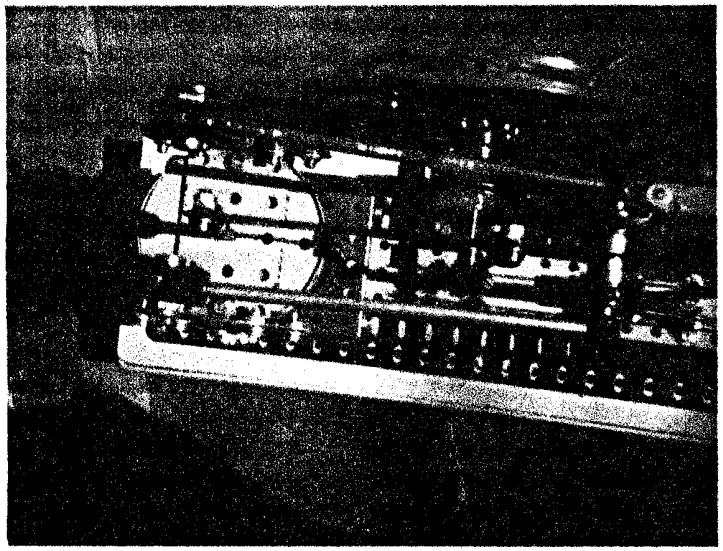

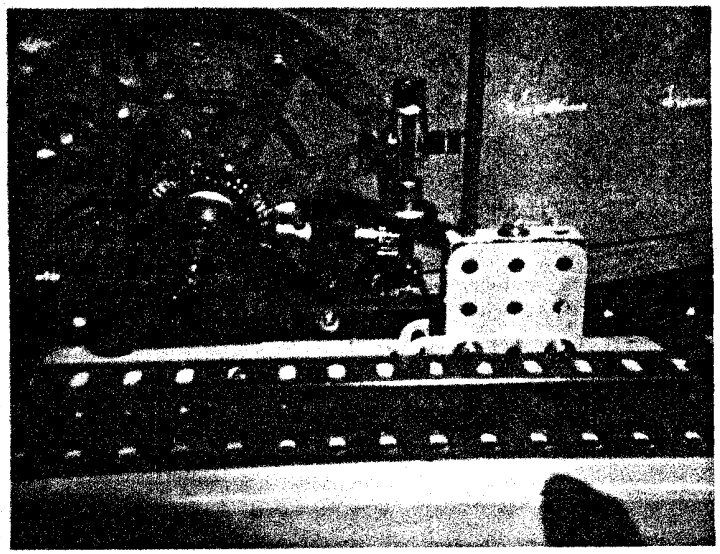

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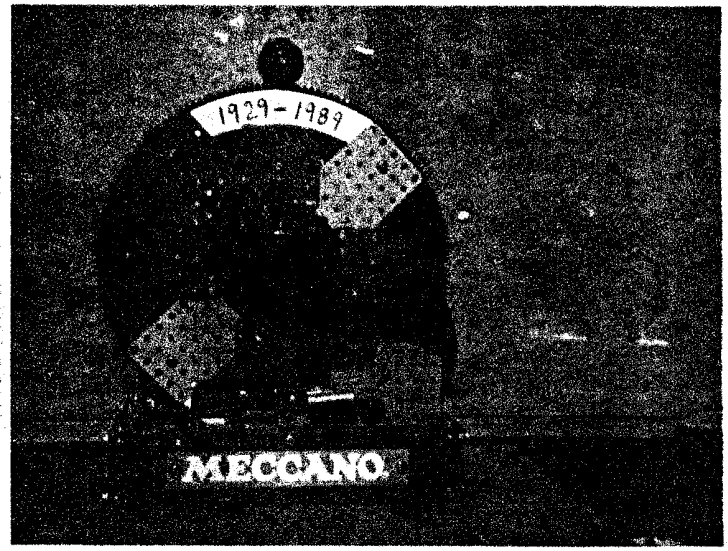


PARTS REQUIRED FOR THE GRASSHOPPER ENGINE

3 of no. 1b	2 of no. 35	2 of no. 116a
2 of no. 2a	65 of no. 37	1 of no. 118
4 of no. 3	24 of no. 37a	1 of no. 126
1 of no. 5	39 of no. 38	1 of no. 126a
4 of no. 8	1 of no. 43	1 of no. 132
2 of no. 9f	1 of no. 45	2 of no. 136a
3 of no. 10	2 of no. 48	2 of no. 147b
9 of no. 12	2 of no. 48a	1 of no. 160
2 of no. 14	2 of no. 48b	1 of no. 161
3 of no. 15a	1 of no. 51	1 of no. 186a
2 of no. 16	1 of no. 53	4 of no. 190a
1 of no. 17	4 of no. 59	2 of no. 191
1 of no. 18b	1 of no. 62	3 of no. 212
1 of no. 22	2 of no. 63	4 of no. 214
1 of no. 24	2 of no. 74	4 of no. 235b
1 of no. 26	3 of no. 90	1 of no. 236
1 of no. 30a-☆	7 of no. 111	1 of no. 237
1 of no. 30c-☆	4 of no. 111a	1 M5 motor

☆-OR 1 of no. 28 & 1 of no. 26

OTHER SYSTEMS NEWSLETTER

Tony Knowles has launched a six- monthly Newsletter concerned with constructional systems other than Meccano. The main object is to record detailed facts about these systems, including their histories and development.

If you are interested, the first issue can be obtained by writing to Tony at 7 Potters Way, Laverstock, Slisbury, SP1 1PY.

It is free, but postage would be appreciated.

IT'S BEEN TEN YEARS SINCE WHAT????

One notable anniversary will have only just passed by the time you read this. To our knowledge, the major club publications have missed it, and even the Meccano fraternity seems not to have noticed. What is this event, you ask?

The 30th November, 1989 was the tenth anniversary of Binns Road shutting its doors for good.

Not a happy anniversary, but one worth mentioning.

Martian Orrery

MHSW 4/10/89

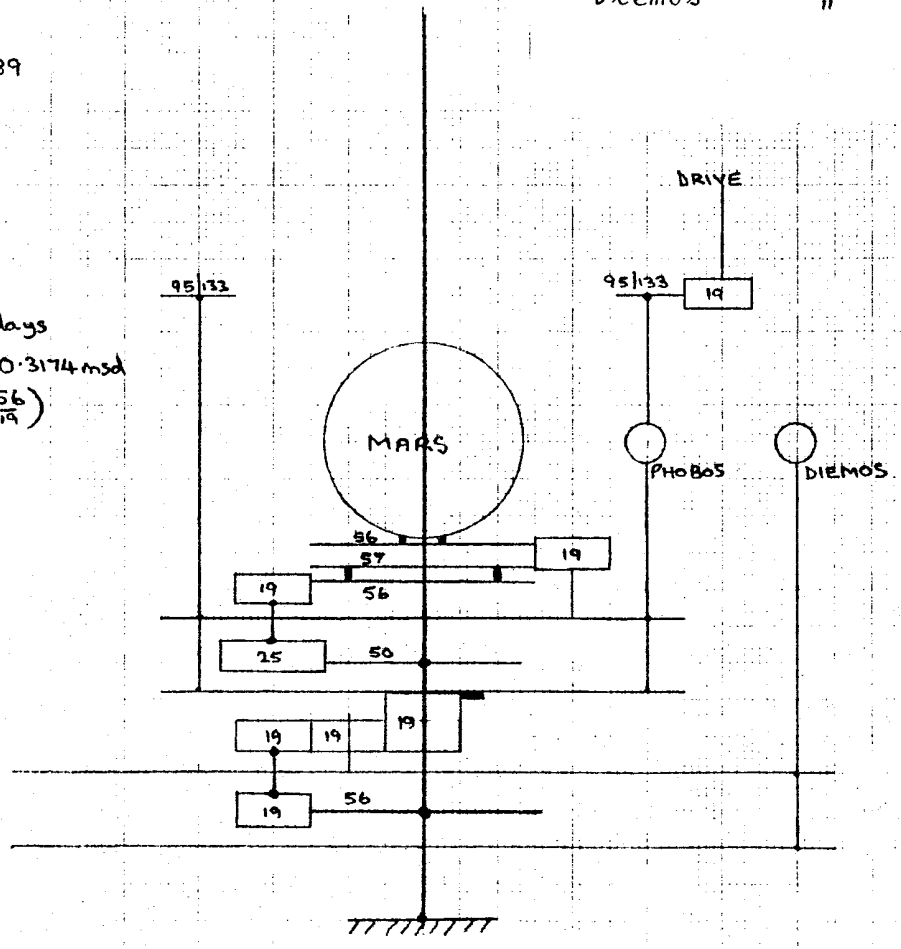
	Mean Solar Days	Relative model period	Error
Mars (rotational)	1.0262	Datum	-
Phobos (revolutional)	0.319	0.317	-0.50%
Diemos "	1.263	1.253	-0.80%

MARS ROTATIONAL PERIOD(DATUM) = 1·0262 m.s.days

PHOBOS REV. PERIOD = $1{\cdot}0262 \times \left(1 - \frac{50}{25} \times \frac{19}{56} \times \frac{57}{56}\right) = 0{\cdot}3174$ msd

DIEMOS REV. PERIOD = $1{\cdot}0262 \times \left(1 - \frac{50}{25} \times \frac{19}{56} \times \frac{57}{56}\right) \times \left(1 + \frac{56}{19}\right)$

= 1·253 msd



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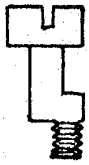
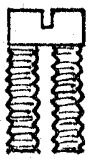


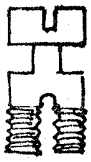
For mismatched holes

For holes too near the edge

Corrugated head for plier grip



For bolting together two adjacent holes

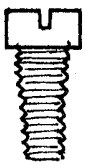


For holes which still mismatch

BINNS ROAD TAPPED BOSS SPECIALS

For crooked holes

For tapered holes



For tapered holes

For undrilled, untapped bosses

For untapped bosses

MFS have brought to you a new range of Meccano-compatible bolts for the advanced model builder.

Featuring cheeseheads and strong threads, they are a must for every enthusiast's toolbox for those awkward places.

ASK YOUR LOCAL DEALER TO SHOW YOU THEM ALL

All MFS products are backed up by our unique ten minute guarantee against any imperfections due to bad workmanship. If at all dissatisfied by any of our products, please do not hesitate to get lost.

NORTON NOTES

Due to a sinus infection, and pressure of other commitments, Charles has had to temporarily suspend all matters Meccano- and that unfortunately, includes his Chairman's Chat, for SMC News.

So get well soon, Charles- and we hope you're wielding a screwdriver again in the near future.

WHERE IS KELHAM ISLAND MUSEUM?

I'r told that many people in Sheffield itself don't know the whereabouts of KI. There used to be a sign to the museum on the roundabout adjoining Commercial Street, but not any more.

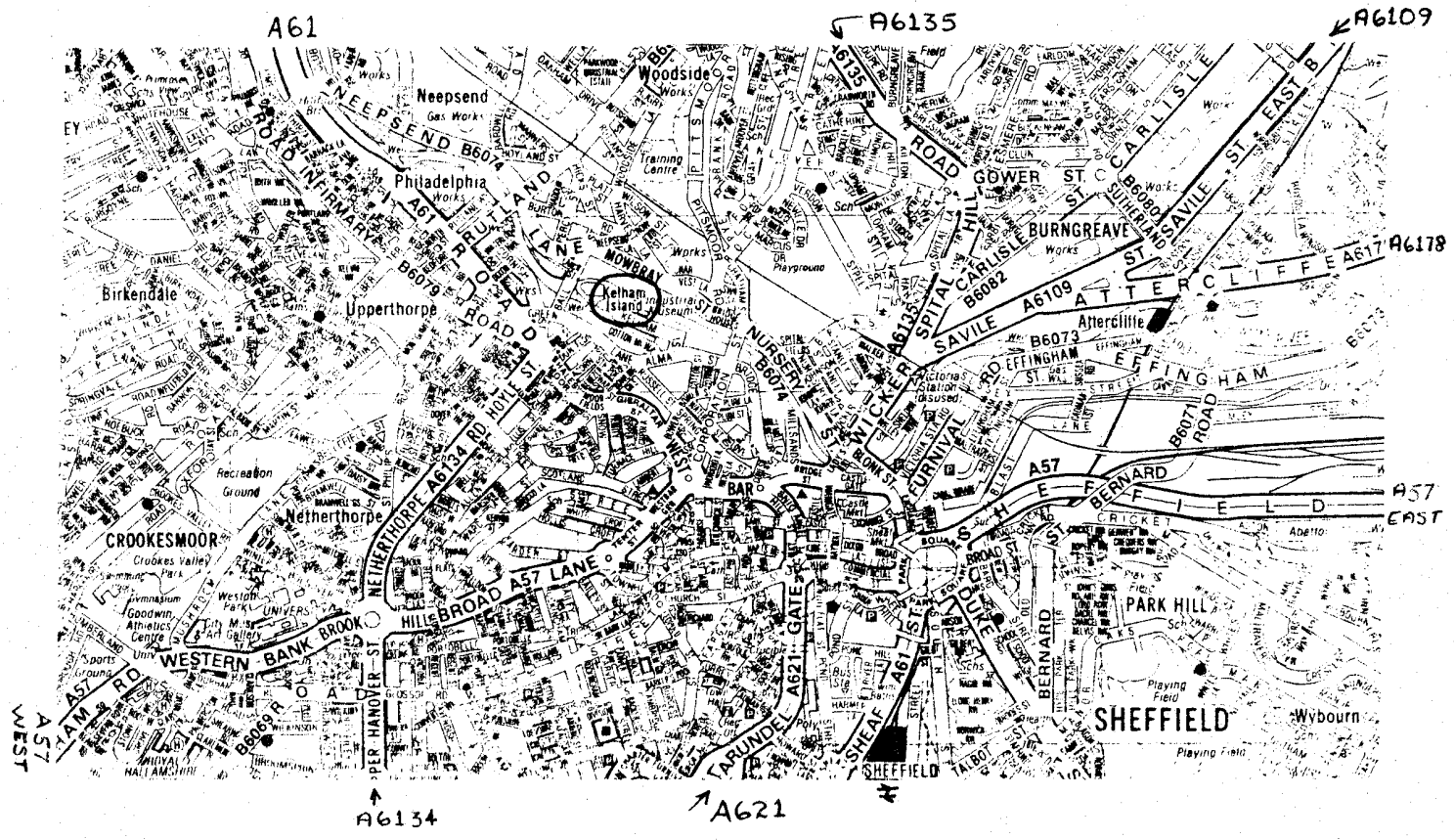
The map below makes it clear.

ROUTES- From the south. M1, A57 Parkway, At end of Parkway, at large roundabout, follow signs for A57 Manchester. Half a mile on from roundabout, bear right at mini roundabout just past bus station on right. Keep in right hand lane up short stretch of six- lane road-West Bar. Turn sharp right at next roundabout onto Corporation St. Follow signs on left to museum.

From the north. M1, leave at jun ction 34. Follow A6178 into town. Look for Manchester A57 signs, round the one way system, then West Bar and Corporation St.

From the west. A57 into town, past the police HQ on the left (West Bar Green), then at the island take the second turning onto Corporation St.

From the east. A57, Parkway, then as above.



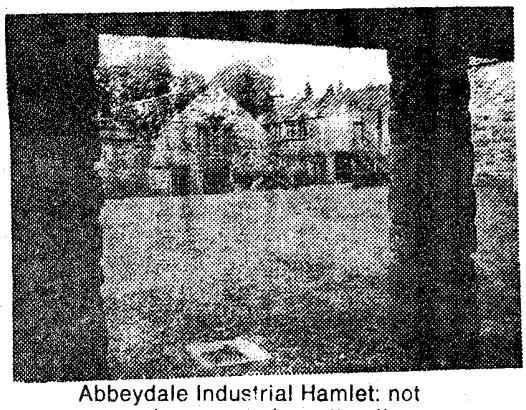
TOURISM IN SHEFFIELD- From a Meccanoman's point of view

Although the term 'Tourism' conjures up images of overcrowded tourist traps and tacky commercialism, ther is another side to the coin. Many cities like Sheffield have much to offer the visitor, and one of our city's best attractions, as mentioned in the attached article, is Kelham Island Museum. It has the biggest preserved steam engine in the country; it maintains the world famous tradition of the 'Little mesters' ; and houses several other extremely rare and highly interesting articles.

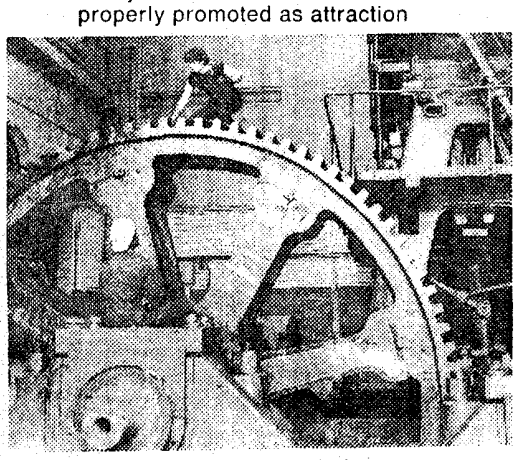
But what does the Secretary find when he visits Kelham recently, with the intention of producing some 'promo' material for next year's Guild exhibition? The only leaflets available about the museum are short, a bit waffly, and teribly photocopied. One thing seems clear; we cannot depend on Kelham to advertise our exhibition. They can't advertise themselves!

Tourism drive rapped as new hotel is approved

Crucible Theatre:consultants criticised its closure during the summer months



Abbeydale Industrial Hamlet: not properly promoted as attraction



Kelham Island Industrial Museum: one of city's tourism strong points

FRENCH businessmen are set to be given the go-ahead to build a luxury hotel in the centre of the city — coinciding with a major study critical of Sheffield's attempts to cash in on tourism.

Experts are recommending that the city council and businessmen do far more to exploit the lucrative tourist market, and urge the basic need for far better accommodation for visitors.

Councillors meeting this Monday are expected to approve a 178-bed hotel with at least a four-star rating on Tudor Square, with strict conditions to ensure a top quality development.

But London-based management group Coopers and Lybrand were asked by the English Tourist Board to look at the city — and they have given an unflattering account of what they saw.

Littered streets, the two leading hotels showing signs of age, graffiti, a shortage of good quality restaurants, poor parking, especially for coaches, the Crucible Theatre closed during the summer months when many visitors are around, lack of toilets and inadequate signposting.

by **NEIL FIELDHOUSE** Political Editor

It amounts to a city with too few attractions — and little being done to promote those that exist, such as Kelham Island museum, Abbeydale Industrial Hamlet and numerous festivals.

An experienced professional tourist officer with flair and vision should be appointed to lead the way forward, say Coopers and Lybrand.

Among their recommendations:

- A national sport museum, along the lines of Bradford's highly-successful photographic museum and linking with the World Student Games;
- An industrial heritage centre, reflecting the city's links with steel, and tours of existing industry such as Bassett's sweet factory;
- A purpose-built conference centre and improved and more hotels.
- Sheffield should be an automatic venue for rock stars touring the country.

They cite the example of Birmingham, which pinpointed tourism as one of the main foundations on which to rebuild the city's shattered economy.

MAKING INSULATING SPACERS

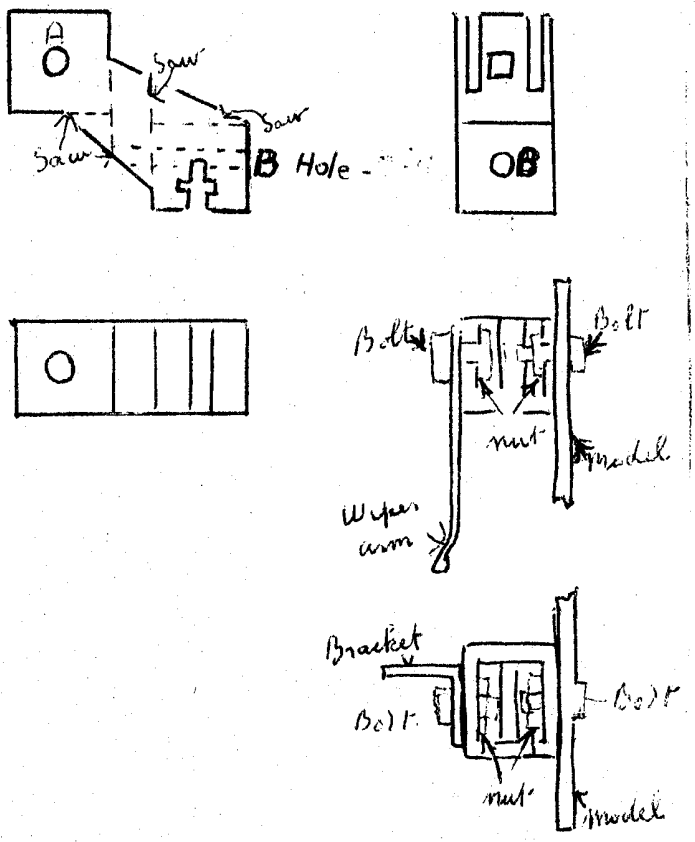
Alan Grimshaw

Meccanomen who are distracted from their favourite pastime by being asked to put up new curtains may like to take revenge on the fiddly nylon fastenings used for such purposes by making insulating spacers from them!

The particular part in question is the curtain rail mount of the Harris type; the side view of the complete bracket, shown below, should be adequate for identification purposes.

Alan writes;'Drill bolt size hole at A; open hole at B. Saw with fine saw as marked to make two different size blocks that can be fixed to model with nuts and bolts'.

Once you have obtained a sample of these brackets you will see, assisted by the diagrams, that what you end up with is two hollow boxes with holes for bolts. The spacers are versatile and tough, and are much cheaper than the genuine Elrctrikit item.



MECCANO - A SCALE MODELLING MEDIUM

By Paul J Joachim

It has been said that the weakness of Meccano is its inability to represent the prototype with the detail, accuracy, and so ultimately the satisfaction, that other media, like plastic kits, can reach. Yet it is quite possible to create replicas with detail down to the last rivet and scale accuracy to a fraction of a percent, which lack the ultimately convincing "something" that persuades the observer that the model has captured the essence of the prototype.

"Scale modelling in Meccano is a contradiction in terms", as one Meccanoman put it, "You can only get within half-an-inch, the colours are all wrong and the thing is full of holes anyway". But I've seen Meccano models at exhibitions where visitors have said, "I've driven one of those - it's exactly right!" So what is this kind of modelling all about?

"It's akin to black-and-white photography", says Howard Somerville (the creator of Saxtead Mill), "The aim is not to re-create the subject in all verisimilitude, but to exploit the beauty of the medium itself", with the result that the modeller is able to say something quite new and revealing about his chosen prototype.

This approach implies that the modeller has to be an artist - since exploitation of the medium and working beyond a mere slavish copy, both require the application of skills outside the ability of science and technology to measure.

So part of the challenge is to use Meccano as a particularly complex medium in itself. Another part of the challenge is to use the Meccano system as it always was intended - engineering in miniature.

Meccano is so versatile that the system can be applied to the reproduction of any mechanical construction or contrivance without machine-tools. To do this in a way that reproduces an original, not only in function, but also in scale form and proportion, just makes the challenge to ingenuity and inventiveness that much more interesting.

The other issue is that of scale. To those who have tried it, the key to successful scale modelling in Meccano may well be the choice of scale itself. It must differ for each subject. Very often it seems to be dictated by the availability and size of a key component like tyres, wheels or motors. However, it can be more subtle; the compound curves of a piece of bodywork, the relative sizes of critical mechanisms, the weight of a vital structural component have all, in my experience, been deciding factors in the choice of the "right" scale. Too large, and the model comes out ponderous, physically too heavy and crude-looking; too small, and vitally characteristic bits of detail are missed, relative shapes force distorting compromises and the model looks "bitty" and toy-like.

By the way, "half-an-inch" is certainly no limitation, look at masters like Bob Ford, Philip Webb and Bob Brooker who regularly work within "half-a-hole" and less.

The scale approach to Meccano is not only a challenging discipline for the accomplished adult modeller but also first-rate training for the young engineer too. It requires thorough research and understanding of a prototype and then translation into mechanical realisation, but with the use of artistic and æsthetic talent which, in the end, contribute to greater reward; the product looks and works "just like the real thing". After all, that is exactly what Frank Hornby himself promised his customers in the first place!

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DIARY DATES- 1989/1990

DECEMBER 16th	North East London Meccano Club, Club Meeting, Barkingside.
DECEMBER 27th-JANUARY 3rd	London Transport Museum, Covent Garden.
1990	
JANUARY 27th	North Midlands Meccano Guild, club Meeting, Oxton.
FEBRUARY 24th	Henley Society of Meccano Engineers, Club Meeting, Henley.
MARCH 3rd.	North East London Meccano Club, Club Meeting, Barkingside.
MARCH 10th	West London Meccano Society, Club Meeting, Greenford.
MARCH 17th/18th	SHEFFIELD MECCANO GUILD ANNUAL EXHIBITION, KELHAM ISLAND INDUSTRIAL MUSEUM, SHEFFIELD.
MARCH 31st.	Midlands Meccano Guild, Club Meeting, Alcester.
APRIL 21st.	Sheffield Meccano Guild, Club Meeting, Norton Church Hall.
AUGUST 4th.	Sheffield Meccano Guild, Club Meeting, Norton..
OCTOBER 20th.	Sheffield Meccano Guild, Club Meeting, Norton.