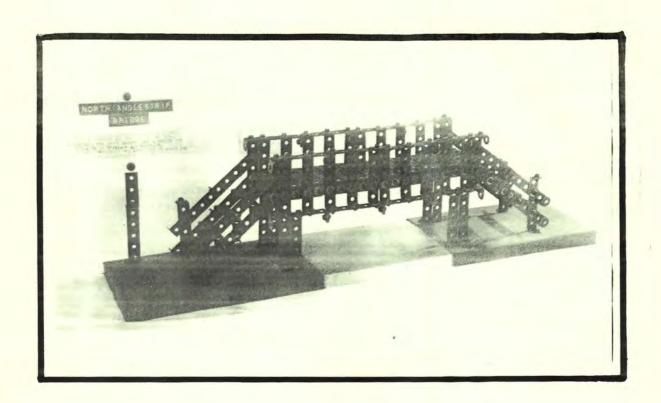
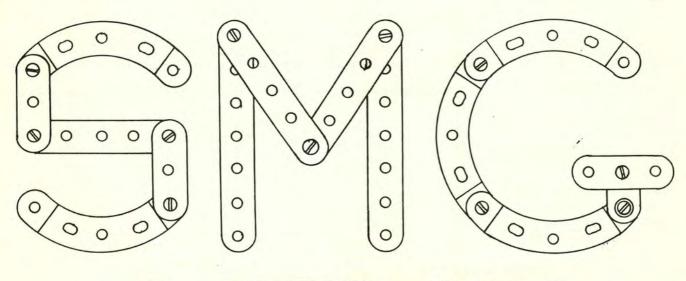
SHEFFIELD MECCANO GUILD





-NEWS-

No. 39

September 1992

THE SHEFFIELD MECCANO GUILD

GUILD OFFICERS:

CHAIRMAN-Barrie McKenzie,

PRESIDENT-Richard Bingham,

SECRETARY & TREASURER-Mike Beadman,

NEWSLETTER EDITOR-Rob Mitchell,

Thanks go to Dave Yates, from Bolsover, for kindly producing half tones of photos for reproduction in SMG News.

COVER STORY

'North Anglestrip Bridge', constructed from 101 of part no. 48a by Charles Hatfield for this years single part competition at Skegness. SMG News is produced quarterly by the Sheffield Meccano Guild in March, June, September, and December of each year.

Both the SMG Secretary and Newsletter Editor welcome any items sent in by SMG members (or others:) for inclusion in SMG News. There are no copy dates or deadlines; contributions will be included in the next issue.

Editorial

It is always something of a relief when another newsletter is complete- even more so when they are posted, because that's it- for a few months, anyway. Even a comparatively modest publication like this can have a voracious appetite for time (and contributions.) Time is not a great problem, but items for inclusion can be, so please send in anything you can that might be of interest to others, preferably Meccano related. Full blown model building instructions would be great, but are by no means essential. A few sentences and a picture of your latest creation, new uses for parts, a mechanism- anything at all- would be appreciated by everybody.

October 17th. is our next meeting and ACM at Norton Church Hall, and this issue of SMG News has been held back a little so that its delivery date is close to the meeting. More details are to be found inside. See you all with your magnificent creations. MB & RM.

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Secretary's Scribblings

First of all, a note from JAN SCHURINK about ties. Many Meccano folk will have seen these ties of Jan's at exhibitions; in a dark wine red with MECCANO faintly imprinted throughout, and the famous 40's/50's manual cover Blocksetter illustration in the centre

famous 40's/50's manual cover Blocksetter illustration in the centre.

To cater for those of a tie-wearing persuasion, Jan is considering having another batch produced. Price will be £10-£12 depending on the number of orders received. Anyone interested, please contact me- Jan has asked Guild secretaries to handle enquiries, then he can see if there is enough interest to proceed.

It was my pleasure recently to spend some time with two delightful young ladies- my nieces, six and eight years old, who seem interested in Meccano (can't imagine where they get it from). Even at these tender ages, they need little demonstration of the superiority of Meccano over LETGO, and seem to take at once to the idea of using an Allen key instead of a screwdriver. No prizes for guessing what will be in their Christmas stockings from Uncle Michael.

JOHN WESTWOOD had kind words for the SMG in the latest International Meccanoman, giving a good precis of our activities over the last year. John says he likes to keep in touch with Meccano events in Sheffield because he has relatives here in Grenoside and in the city, he also reports in a letter to Rob concerning the CAMS exhibition at Exincourt, France. Enthusiasm is remarkable, modelling standards high, and the show was a big success.

International Meccanoman has received some 'flak' during it's infancy, but like the production you are reading, it can take time to learn how to stick it all together in an acceptable manner. Make up your own mind about IM! Rob has a review copy, or you can subscribe for £6 a year (three issues), from Don Sawyer, 32 West St., Marlow, Bucks SL7 2NB.

The Sec. spent a most enjoyable weekend on the 22nd/23rd August at the Lincolnshire Steam and Vintage Rally, at the Lincolnshire Showground. The Meccano side of things was organised by Geoff Brown and Pete Pyefinch, on behalf of the NMMG, part of a large model/craft/byegones display in the Exhibition Hall. Public attendance was good, especially on the Sunday, and on the Saturday evening, preceded by a storm which cleared away magically in time, there was an exhibitors' 'do' with beer tent, jazz band, and a traditional fairground with the Shawman's Engines doing their thing- ideal for warming your hands on of a cool evening!

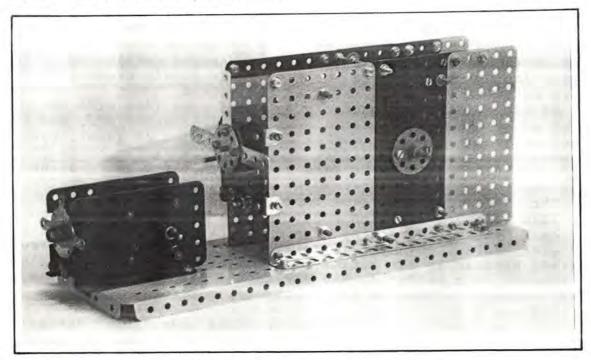
During the exhibition, one of the basic advantages of Meccano as a modelling medium came into play. My model- an '0' gauge Loco-would not work. A drastic rethink was needed. Reg Hall suggested that a worm and pinion drive would fit instead of the suspect belt drive, and after giving the matter some thought, parts were purchased from John Linder, and a working model was the result. This brought home once again not only the versatility of Meccano, but the speed with which ideas can be put into practice.

October 17th sees the Guild's AGM. We will as always attempt to keep the business matters to a mimimum, since the aim is to enjoy the meeting, but if you have anything to say, complain about, or throw, then come along. It's your Guild, your meeting.

See you there.

LIFE x 2 ELECTRIKIT E20R MOTOR

Designed and constructed by RUSS CARR



I wished to build a universal eletric motor using Electrikit components. This type of motor is conspicuously absent from the Electrikit manual. The universal motors most familiar to Meccanomen are of course the sideplate motors, e.g. the E20R which served as the prototype for this model.

SIDEPLATE CONSTRUCTION

Photo No.1. Each sideplate consists of a $5\frac{1}{2}$ " x $3\frac{1}{2}$ " flat plate, a $5\frac{1}{2}$ " x $2\frac{1}{2}$ " insulating plate and a $5\frac{1}{2}$ " x $2\frac{1}{2}$ " flat plate, overlaid along the top edge by a $7\frac{1}{2}$ " strip and along the bottom edge by a $7\frac{1}{2}$ " angle girder. A bush wheel is bolted to the centre of the insulated plate to serve as the bearing.

ROTOR CONSTRUCTION

Photo No. 2. To a six hole bush wheel bolt three 1" x $\frac{1}{2}$ " angle brackets. To a six hole insulated bush wheel fix six contact studs. Three angle brackets are secured to alternate studs and the studs are linked in pairs by bare copper wire. Mount three cylindrical coils with cores to the angle brackets on both bush wheels by the threaded holes, 'S' terminal nearest the contact studs. Secure six undistorted formed slotted strips to the outside of the rotor in pairs, using two Meccano (dished) washers under each pair.

Wire the coils-'S' terminal to $\frac{1}{2}$ " angle bracket then to E' terminal on the next coil. Fit a $4\frac{1}{2}$ " axle rod and adjust for true running (very important.)

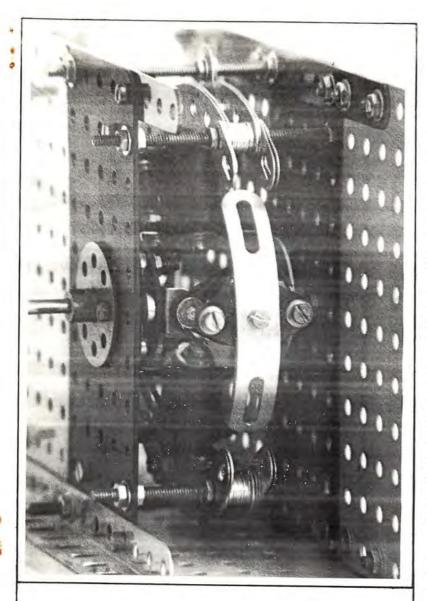


Photo no.1; above left. General view of an E2OR with it's big brother. Photo no.2; above.One sideplate removed to show the rotor and stator. Photo no.3; below. Birds eye view of the 'internals'.

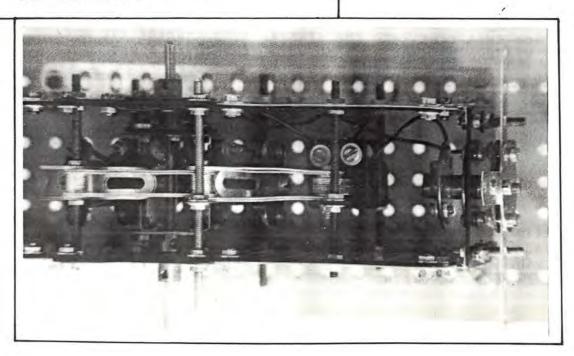
STATOR CONSTRUCTION

Photos 2 & 3. Mount two rectangular coils with coil holders to six $3\frac{1}{2}$ " strips. The poles are made of sixteen $2\frac{1}{2}$ " curved strips as shown. Strips are used double and pairs of strips are spaced by 4mm washers. The stator is mounted to the sideplates by threaded rods. Insulated fishplates were used in places to prevent steel to steel contact across the poles.

OTHER DETAILS

Brushes were 2" bent wiper arms mounted diagonally on the inside of the insulated sideplate, position indicated by the boltheads on photo no. 2. The switch is a simple rocker affair; the two long bolts serve as both stops and switch contacts. An elastic band returns the switch to centre off position, and no reverse was fitted to ensure the brushes were always trailing.

The motor is series wound, i.e. current flows through the stator windings then through the rotor via the brushgear. A power supply of 24 to 30 volts DC is required. A somewhat greater voltage would be needed if an AC supply was used. R.C.



Around The Shows

LIONEL Exhibition, Winter Gardens, Ilkley. Report by ALAN GRIMSHAW.

On the 30th of May, the Sheffield Meccano Guild and friends put on a show of Meccane models at the Lionel Railways of America Exhibition in the Winter Gardens. A varied selection of models filled

about forty five feet of tables.

JOHN BADER brought his V12 Aero Engine as featured in NEWSMAG; an Overtype Stram Engine from CQ; a Merry Go Round, also from CQ; an SML 11 Horizontal Steam Engine; a Ferris Wheel in Nickel parts; a small Oscillating Engine; and a Magic Motor Windmill.

WAYNE STANCLIFFE showed his own design Ferris Wheel; his pair of Keith Cameron design Tipping Lorries from CQ; and an Easter Egg Meccanograph from a '75MM.

JIM MORTIMER displayed his own design model of Blackpool Tower

and Ballroom.

JACK PARTRIDGE, although unable to attend himself, sent along

a model of the Maudsley Table Engine from a CQ design.

RICHARD BINGHAM took his Climbing Man model, plus his Synchronous Clock, and also displayed BARRIE MACKENZIE'S Dealer Display model Windmill.

ALAN GRIMSHAW showed a Swiss Chalet; a Locomotive with Crane; a Sky-Ride; a Tightrope Walker; a Ferris Wheel; and two 'minimum size'

Meccanographs.

Thanks go to Fred Clarke for help with setting up and explaining things to the visiting public. (SMG PR Officer?)

HOLLINGWOOD LANE SCHOOL GALA. Report by JOHN BADER.

For the third consecutive year, members of the SMG were invited to stage a Meccano display at the annual Gala, held on the afternoon of June the 20th. A fee of 25p for adults, and 10p for children was made for viewing, all of which went to school funds.

Although the whole event lasted only around three hours, more people than ever came into the classroom to inspect the models. Thanks

to those Meccanofolk who were able to give their support.

So, from the doorway, round the class, were; WAYNE STANCLIFFE, with a Steam Hammer, a Meccanograph, and his two CQ Tipper Lorries; BRIAN HARPER, and the Sleeping Meccanoman; ROGER BURTON, with his Leyland National Bus, a Jet Plane, a Meccanograph, and a Wind Powered Generator, plus an 040T Loco on a large oval of '0' Gaude track; ALAN (Red and Green) GRIMSHAW brought a Trick Unicyclist, two Meccanographs, Konkoly's Sailor, the CQ Table Engine, a Kangaroo, a Fairgroubd Ride, and a Swiss Chalet. JOHN BADER displayed a CO Overtype Steam Engine, a CQ Carousel, and also from CQ, a Traction Engine. as well as his Nickel Ferris Wheel, the V12 Aero Engine, and his Horizontal Steam Engine. Son JONATHAN helped with a Mini Windmill and a Truck.

PAUL SMITH was not ther in person, but sent along his SMLT

Chassis in Red and Green.

SHEFFIELD MODEL RAILWAY ENTHUSIASTS' EXHIBITION

4th/5th/6th September. Report and picture by BARRIE MACKENZIE

Could Meccano models live with model railways? Would it be possible for tinplate Hornby trains of the 30's to be displayed satisfactorally alongside landscaped railways with rolling hills, pine forests and bridges spanning raging torrents? We thought it would work and were determined to try. The SMRE's annual Exhibition

had moved this year from the City Hall to the Octagon Centre at the University, and we had been invited not only to produce a layout of prewar Hornby but to have a display stand which would provide effective publicity for the SMG.

The space available for the Meccano display; was rather limited, but within a frontage of four feet six, and a depth of seven feet six, we were able to show fouteen models covering a wide range of subjects, most of them running continuously. The stand, being deeper that it was wide, presented problems in ensuring all the models could be seen effectively, but by placing smaller exhibits at the front and raising the ones at the back on a platform, it was possible to see everything quite well.

Working from front to back, the foreground was occupied by ROB MITCHELL'S Coke Oven Door Remover (not on photo as Rob was there on Sunday only.), and his Herbert the Dancing Puppet; RICHARD BINGHAM'S

SHEFFIELD MECCANO GUILD

Synchronous Clock, and IAIN MACKENZIE'S Grasshop per Engine and his reproduction Gauge '0' Locomotive, the only non-operating model displayed. MIKE BEADMAN'S newly-built Western Class diesel Locomotive circuited an oval of Hornby track which ran under the rear section of the display. The builder was pleased to discover some suitable 7mm scale nameplates for this model on a nearby stall, scorning Rob's suggestion that it should be christened 'Western Bolt Hole'. CHARLES HATFIELD'S Sheffield Workshop occupied the width of the display, and long before the exhibition opened to the public, SMRE members were crowding round admiring the functions of the various machine tools. On the raised level behind the workshop were Rob's Ping Pong Ball Roller, his rotating Geodesic Sphere, and Richard's tirelessly Climbing Man. Nearby, our Excavator dug

continuously, and raised higher at the back were our Ferris Wheel and Windmill. At the side of the Guild sign on the back wall of the display, the Gothic Wall Clock reminded all of the passing of the

hours in its particularly relaxed, low-key way.

JIM MORTIMER had promised to bring his Blackpool Tower on the Sunday as he returned from Henley, and we were rather concerned when the day passed without any sign of Jim and his wife. He 'phoned the following day to tell the story of the clutch that failed after leaving Henley, and of the two nights' enforced stay in High Wycombe. His biggest worry had been having to abandon the car leaving his large model in the back. We were sorry that he was not able to join us and hope that his problem is now sorted out.

There was no doubt that the Octagon was a popular venue, and time passed quickly as we discussed Meccano and Hornby with the many visitors. Our display presented an oasis of tinplate and steel in the centre of all the plastic and fibres. It is not for me to say

that it was better than the rest, but it was different.

DOING TIME AT KELHAM

6th/7th June. Reportand picture by BARRIE MACKENZIE

The SMG had been invited to put on a special display of timepieces as part of an exhibition on that subject which was to run for the month of June at the Industrial museum. The problem with this sort of theme show is either that models have to be made specially for the display, or we have to rely on members already having suitable models made up.. Clock building, with it's rather special demands, possibly only appeals to a small section of modellers and despite the best efforts of Richard (our resident clock maker extraordinaire) we only just got enough models.



BRIAN ROWBOTHAM made a special effort for the occasion and built up the No. 1 Clock Kit, an exercise which made clear to him why he had put off doing it before.

It was eventually persuaded to function reliably for the exhibition and Brian tells me that, inspired by this success, he has now made a case for it. Richard not only brought along his famous Synchronous clock, but built specially for the exhibition, a Gothic Wall Clock built from instructions he has had for some time. As we got to take this one home after the show, it seemed a good opportunity to make a copy of this in Blue/Gold parts, and this clock now where one can wind it if one is so inclined, by raising the weight when going past.

Brian Harper brought his well known-to us, but not to museum visitors- Grandfather Clock, and the display was completed by an old Nüremburg Clock which we had inherited many years ago and was

restored for the exhibition.

The five assembled time pieces performed well for the two days of the exhibition and created much interest and favourable comment from visitors. The final accolade came at the end of the weekend when the exhibition organisers approached us and asked if our clocks could remain there for the rest of the month. Unfortunately this was not possible, but it was nice to be asked.

Asmiscellany of models and mugshots from our small supply of pictures....



Introducing The Members No.12~ John Bader

John is one of the stalwarts of the Guild, a great guy and a very competent modeller. His latest creation is the French V12 Aero Engine, which runs all day at exhibitions showing off it's complexities - the ignition timing is most instructive.

Rob Mitchell

cornered 'im recently and extracted the following:-

- Q. How long have you been a Meccano modeller?
- A. At least twenty five years; probably more.
- Q. How did you start?
- A. I bought a No.1 Set during a holiday at Scarborough.
- Q. What is your favourite Meccano part?
- A. The Chane Grab-because it doesn't do anything!
- Q. What are your favourite modelling subjects?
- A. Anything-except looms and clocks.
- Q. What has been your most
- satisfying model to date, and why?

 A. The Supermeccanograph, because of the automation. I was pleased to see it all working.
- Q. What do you do for a living?
- A. I'm a wagon driver.

A.

- Q. What would you really like to build?
- A. Eric Turner's Lorry Mounted Crane.
- Q. How did you find out about the SMG?

Robin Johnson's publicity mailshot.

- Q. What are interests apart from modelling in Meccano?
- A. Reading about Meccano!



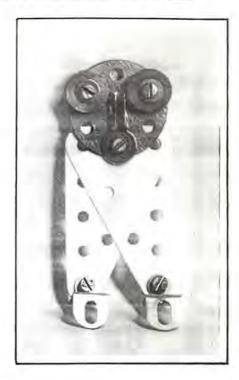
SMG Megamodel no.7-Owl

Yet another gargantuan Meccano essay from the workbench of John Bader. This pioneering Neccanoman is featured elsewhere in this issue with a much more modest creation for your pleasure.

Here we go, then. Bolt a rod and strip connector to a 6-hole wheel disc with a pair of opposed triangular flexible plates to make the beak, head and body. Two reversed angle brackets become feet, and a pair of ½" pullies are the eyes

PARTS REQUIRED
2 x 23; 1 x 24c; 3 x 37; 2 x 37a/c; 2 x 111c;
2 x 125; 1 x 212; 2 x 221.

You and your megamodel; we have almost run out of material for this series. Some may consider this to be very fortunate, but those who think otherwise will hopefully be consumed by enough anguish to send in some ideas! Over to you!!



And yet more from John

Bent 22s.....

We all suffer from this. Some never did run true, some have had 'untruth' thrust upon them. Now, JOHN BADER tells you what can be done with them.

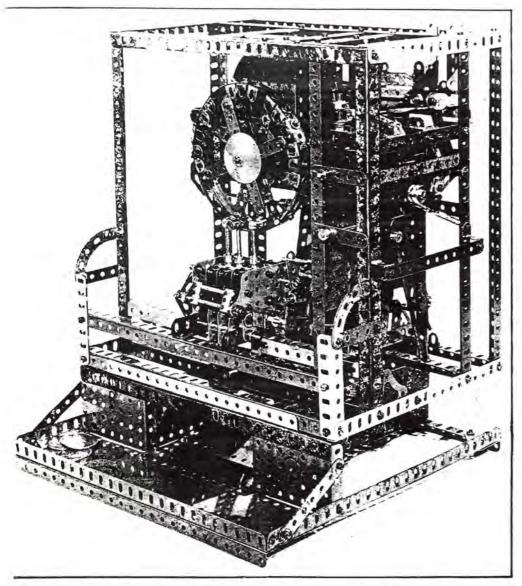
'You know when you buy an odd bag of Meccano bits and you rush home to sort it out? When you get to the 1" Pulleys with boss, they're generally put into two piles; those that don't wobble and are of some use, and those that do wobble or are squashed. These might get made into collars, but what about those that don't even fit on an axle, 'cos they're not Meccano and the Grubscrew is missing?

Well, now you can make them into really useful pen and pencil holders! To construct simply place pulley, boss uppermost, onto such as a window sill, mantlepiece etc. To operate, stick the pointy end of a pen into the clear hole of the boss, as indicated in diagram. The pen

is ready to hand at a moment's notice!



Prototyping with Meccano



CONDENSED FROM AN ARTICLE BY 'FETTLER' in the MODEL ENGINEER, 7/8/92

Meccano has heatured in the early lives of many engineers. My father tells of an older relative-a publicanbeing shown some, strips brought in by a chap called Frank Hornby, who was looking for a backer. An early contact with what became Mechanics Made Easy.

As a youngster, my father often borrowed my Meccano to make prototype jigs and fixtures.

one day while the 'Old Man' was away, and I'd been left in charge of his engineering works, a customer asked if we could come up with a machine version of a plastic game he showed me. The basic idea being that if you lined up the hole in the middle of one of a set of counters you would win a prize.

'can you build me a machine to do that?' he said. There should be three prizes. Your penny back, 2d, or a shilling jackpot if all three line up? Levers, timers, wipers, springs, they all came to mind in

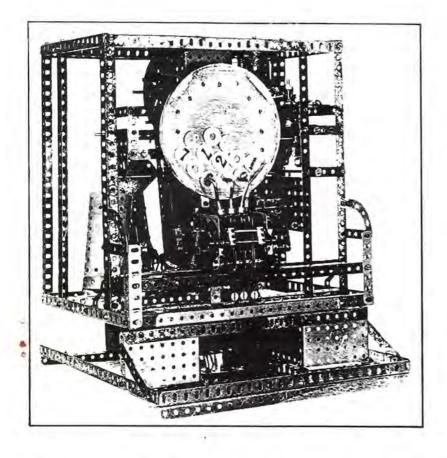
nightmarish combination.

Meccano: That's it. Give it a try in Meccano. The above picture shows my efforts to construct a suitable mechanism. From the outset I had modular construction in mind. The outer case would protect the mechanism from the 'punters', the coin mechanism would be changeable for other values- even foreign coins for export.

The insertion of a penny frees the mechanism. On pulling the lever, the coin is transferred to the hoppers, or, if full, to the profit box. The Game Drum spins to shuffle the counters, then stops in a random position when the sensing prongs below the drum move forward to detect whether a

prize is due, and, if so, pay it out. Easy!

Improvements were made, and a test Game Drum was fitted (below). The variables left were the numbers of counters, drilled and undrilled, and the duration of each game. Mathematics decided the former, and the size of an air brake coupled to a Meccano clockwork motor (automatically wound on each pull) decided the latter.



Several thousand operations were recorded to prove and develop the game, provided everything was well oiled and treated with respect, reliability was remarkably good.

The customer gave the go-ahead to produce a full prototype, with case, anti snatch mecahanism, and

all.

The work progressed, beefing up weaker parts as necessary, otherwise taking sizes directly from Meccano. Each piece was made so that it could be modified or replaced as required.

Adjustments were made so that the coin mechanism would work sweetly with the usual thicknesses of worn and unworn flat pennies. Bent, over-thick, drilled or magnetic discs were automatically not accepted; that was a teaser to get right! Another problem was the difference in thickness between old and new coins. I took a chance, and relied

on the law of averages to even out the mix. (Pocket fluff turned out to

be a bigger hazard).

The machine was then put on public trial, first in a Golf Club, then in a Penny Arcade. I watched from a distance, fascinated, as the diddlers tried to fiddle the mechanism.

While the machine met all requirements, it was eclipsed by electronic machines which had just appeared on the market. It therefore never went into production, but saw service in another Golf Club until its brass gears wore out.

Although I added the parts to my Meccano collection, Father had the last word. He said I was a B....f... for taking the job on, but we did

profit from it- didn't he!

Many thanks to FRANK SINGLETON for submitting this article.

Right- the finished item, ready to take on the diddlers and fiddlers. (Young girls of 9-13 years old were the most fiendish).

A Slimline Differential

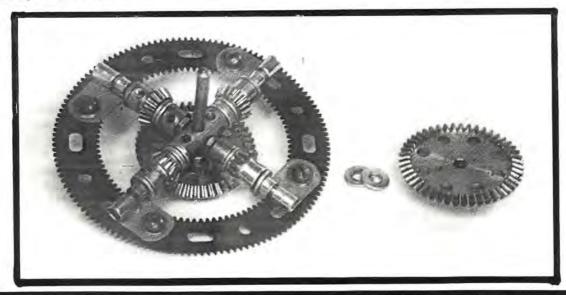
Meccano differentials come in all manner of shapes, sizes and gear arrangements; most Meccanophiles will have probably seen more varieties than Heinz. Differentials built up using a gear ring are not new- the well known example in the back hub of a medium scale traction engine being typical, using a 2½" gear for centralisation.

This design, however, is different. Firstly, it is very slim, using 16 and 48 tooth bevels which make for a narrow unit, even slimmer than 50 tooth contrates and 15 tooth pinions. Secondly, there are four idlers which lie in almost the same plane as the gear ring making for both a very strong assembly and drive. The cage is less likely to flex torsionally, like what a pair of 48's on a 57 tooth gear can do under load. The obvious penalty for this is the increased diameter, from $1\frac{1}{2}$ " to $3\frac{1}{2}$ ", but the effective overall width is less than $1\frac{1}{2}$ " from the outsides of the 48 tooth bevel bosses.

Construction is straightforward, as can be seen. The four idler shafts are two $1\frac{1}{2}$ " axle rods and two long (plain) threaded pins set into a central coupling. Judicious Meccano and M4 washer packing may be necessary to form a smooth mesh between the bevels.

PARTS REQUIRED

2 x 18a; 4 x 30a; 2 x 30c; 4 x 37; 2 x 37a/c; ? x 38; 2 x 59; 1 x 63; 2 x 115a; 1 x 180; 4 x 212a.



(Continued from opposite)

friction plate of which being a 2" Pulley with Tyre, the Pulley's boss fitting inside the middle hole of the Circular Plate; also a $1\frac{1}{2}$ " Tyre locates inside the inner rim of the 2" Tyre. This $1\frac{1}{2}$ " Tyre accepts the drive from the outer of a pair of $2\frac{1}{2}$ " Gears, which are driven by the motor but are free to turn on the stub axle. The two Gears are fastened together by $\frac{1}{2}$ " Bolts, with Collars on the Bolts acting as spacers. A non-Meccano tension spring is mounted on the stub axle between

1" Pullleys to tension the clutch.

Prior to the gearbox failures, a similar machine to this was made which was quite capable of climbing anything it could grip, climb walls, spin on the spot etc. Have fun!

BEASTIE-Project Abandoned

Occasionally over the last ten years I have experimented with skid steer vehicles with varying degrees of success. I consider such machines to be ideal exhibition models, since they are interesting to build, fun to operate, and can show their paces at exhibitions in a minimum of space.

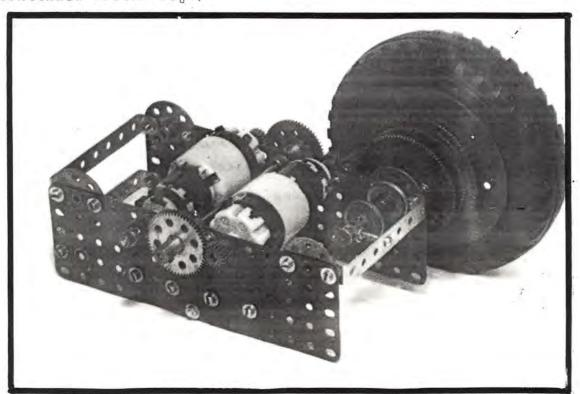
The road wheel and clutch design of the last effort, abandoned due to gearbox failure in BOTH Powerdrives (sob), may be of interest.

The picture to the right shows the hub construction. The tyre is an ashtray type, and the hub is based on two eight hole Bushwheels, spaced ½" apart on ¾" Bolts, and holding pairs of 1½" Strips which act as spokes. The outer ends of these Strips are held together by Double Angle Brackets, the centre holes of which carry ½" Bolts which locate inside the tyre. Built like this, the hub is adjustable for diameter to suit various sizes of tyre.

The drive to the wheel is seen in the lower picture. The inner Bush Wheel of the hub also holds a 4" Circular Plate on long Bolts, length to suit the tyre used. The Plate acts as a sidewall stiffener for the tyre, and also accepts the drive from a clutch, the

(Continued bottom left)





SMG AGM At Norton

Saturday the 17th. of October is the SMG autumn meeting and AGM at Norton Church Hall, and it could be a busy meeting; but let's still have lots of bodies and models, without which it just would'nt be the same!

Firstly, it is hoped that a photo of the SMG regulars will be taken for CQ's 'Down Your Way'series. Secondly, a triumphant return of the mince pies to the serving hatch is expected after an absence of a few years, although not definitely for certain. As if reminders are needed, these are real mince pies for the connoiseur- not half mince half air supermarket examples:

Every club and organisation needs to have an occasional business meeting and the SMG is no exception- its just much shorter than most, thats all. The nitty gritty includes subscription levels for our two meetings, a public exhibition and four newsletters a year. The expected concise balance sheet from our secretary/treasurer will reveal all on the day.

Your newsletter is to be altered. A new format will be adopted- new name, arrangement, or whatever- for our next, 40th., issue. All ideas, suggestions, and especially offers of articles will be gratefully received. Both the secretary/treasurer and editor are willing to continue 'newslettering' for another year unless ousted in a SMGAGM coup or otherwise displaced by fair or foul means.

See you all at Norton Church Hall on 17th. October with more steelwork than Templeborough Melting Shop!

Diary Dates

1992 October 17th

SMG Meeting and AGM, Norton

November 14th

NEMS Exhibition, Darlington

1993 January 16th

NMMG Meeting, Oxton

April 24th

SMG Meeting, Norton

May 15th

NMMG Meeting, Oxton