

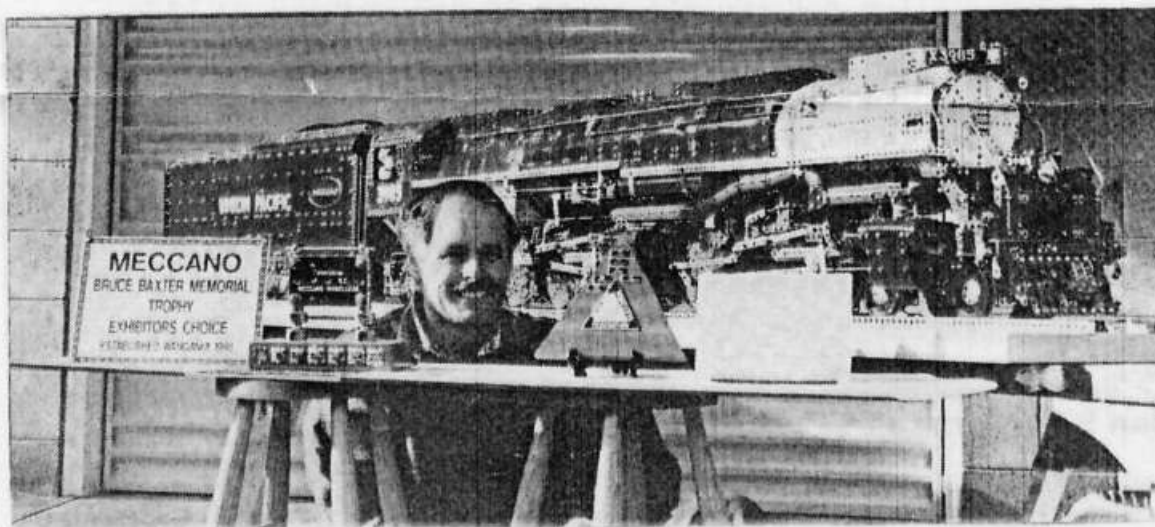
MAGAZINE



EDITOR: Bill Watt,
8 The Esplanade,
Campbell's Bay,
Auckland, N.Z.
Ph (09) 479 5797

WRITTEN AND PRODUCED BY MECCANOMEN FOR MECCANOMEN.

NEIL AND HIS PRIZE-WINNING LOCOMOTIVE AND TENDER.



Westfield locomotive engineer Neil Carey can't resist a challenge - and that is exactly what he got when he built a Meccano model of 'Challenger' type 3985, the largest steam locomotive presently operating in the world.

"The biggest problem was keeping the model to scale," says Neil. "The Meccano system has holes half an inch apart, so there was a lot of planning involved to make sure I got the right parts for the right place."

But the nine months of toil needed to build the model paid off when he won the award for the most outstanding model at the recent New Zealand Meccano Modellers' convention in Auckland.

The model is 3.3 metres long and 56 kilograms (or a little over 10 feet and a shade under nine stone in imperial measurements) and great attention was given to making sure every detail was correct.

(Reproduced from 'Expressions' Sept.1993, NZ Rail Staff Newsletter)

THE AIMS of this magazine are to unite MECCANO Clubs and individual Meccano modellers: to generally promote and encourage the enjoyment of Meccano.

The N.Z.F.M.M. Magazine is registered at the G.P.O., Wellington, as a magazine.

Editorial.

Welcome to 1994 and may it be a productive year for all Meccano devotees.

On our New Zealand scene, in February we will have as visitors two well known and distinguished Meccanomen. First, Jack Partridge, a foundation member of the Midlands Meccano Guild, and his wife are to tour N.Z. by car, arriving at Christchurch at the beginning of the month and leaving from Auckland about 20th Feb. I have notified the N.Z. clubs of this, hoping that Jack will be able to make contact with at least some of us. Second, through John Ince, I have just heard that Peter Kessler, President of the International Society of Meccanomen, is also to be here in February, but I have no knowledge of his movement or dates.

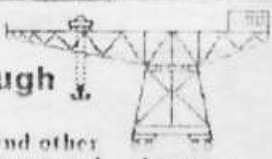
A REMINDER. Don't forget the MWT club's Meccano Exhibition at Easter in Stratford. The venue is the Upstairs Gallery, Broadway Central, Stratford.

Bill

SUBSCRIPTION AND POSTAGE RATES IN NEW ZEALAND DOLLARS.

<u>To</u>	<u>Airmail</u>	<u>Surface Mail.</u>
Australia and Pacific	\$22	\$20
N.America and Asia	\$25	\$20
Europe and United Kingdom	\$27	\$20
S.Africa S.America	\$27	\$20

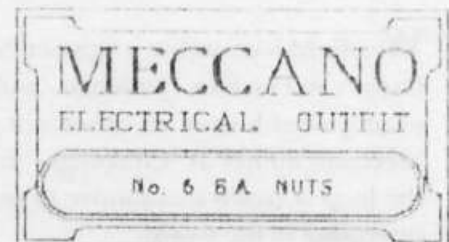
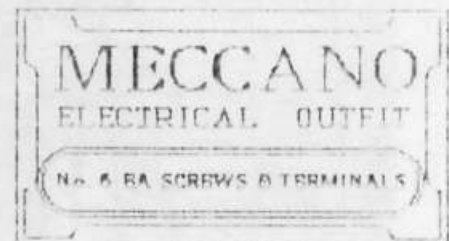
Note: Please send subs to Max George, 3a St. Johns Terrace, Tawa, Wellington.



Don Blakeborough

Collector of Meccano and other metal model building constructional systems.

91 Cornfoot St. Castlecliff, Wanganui.
Phone (06) 344-5924



About 6 weeks ago I went to an auction and purchased some Meccano. A large box full and in amongst the mid-20's parts were the parts from 1920's Electrical Set. This is almost a complete set and the only missing items were two of the four small parts boxes. The two small boxes that were included are as shown in the drawings.

Can any of the Magazine readers advise what the two missing boxes contained? The size of the boxes are 2-1/4" long x 1-1/4" wide and 3/4" deep. The boxes are mottled dark brown, with a red, white and black label.

Volume 5 of the EMP's has now been printed. As has Amendment No. 2 for Volumes 1 - 4. Volumes 1 - 4 has been amended, updated and reprinted. Amendment No. 2 will be included free with Volume 5 to those who need them.

Volumes costs \$30.00 each. Postage is extra and as there are at least three different postage rates to most countries the higher price quoted is for Airpost and the lower price is for Surface. Single copy, UK and Europe \$46.00 : \$16.00. North America \$40.00 : \$14.00. Australia \$25.00 : \$12.50.

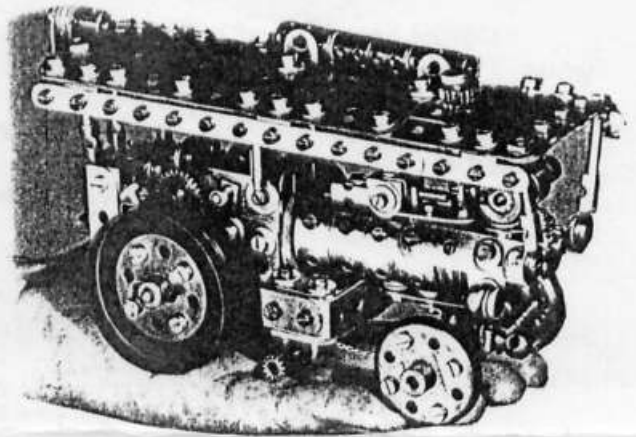
For a set of five volumes the postage is UK and Europe \$106.00 : \$44.00. North America \$94.00 : \$38.00. Australia \$55.00 : \$33.50.

If you purchase these books of me and you recommend them to other new purchasers, I will credit your account with 10% of the new sale.

Don Blakeborough, 91 Cornfoot Street, Castlecliff, Wanganui, 5003, NEW ZEALAND.

MINIATURE TRACTION ENGINE

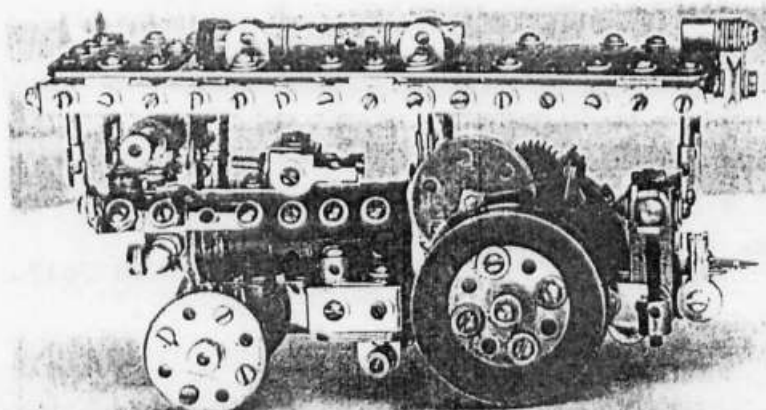
BERT HALLIDAY'S miniature traction engine which featured in Meccano Magazine, November/December, 1970, is a good example of my theory that small Meccano models are often harder to build than the large ones. I recently built - for the second time - this little model, faithfully following the excellent detailed instructions written by "Spanner". It certainly requires nimble fingers and forceps, and is a great little model to build.



In case any other Meccano modeller is inclined to build it, here are a few notes I made as I went along:

1. The first thing I did was photocopy the magazine pages (magazines borrowed - thanks, George) increasing to almost double the original size. This made the illustrations much clearer and the text so much easier to read.
 2. Inside and outside the boiler, instead of the 2" slotted strips (55a) which would be very difficult to bend longitudinally, I used 2" narrow strips (235c), with small washer under.
 3. Instead of obtuse brackets on top of the belly tank I used fishplates as the 12c get in the way of the boiler.
 4. The threaded coupling which eventually holds the boiler support rod should be as high as possible in the slotted hole of the flat girder.
 5. In front of the heat shield, instead of the opened out P/N 11, I used two 12c which need only a little bending.
 6. When fitting the brake, clearance was so tight I used a long grub screw (5mm) with a square nut each side of the P/N 12b. You need a square nut because of the elongated hole.
 7. At the rear where the K & S connectors are bolted to act as canopy supports, because of the spacing and angle of the threaded pins, the two fishplates may have to be left off.
- To anyone who builds it -- good luck with this unique model.

Lloyd Spackman



From our President

Dear Members,

Compliments of the Season to you all, I do hope that all your Christmas expectations were fully realized.

On behalf of all members I wish to extend a warm vote of thanks to our editor Bill Watt and his team for their sterling work in providing us with our magazine during the past year - thanks Bill.

Our editor has prevailed upon me to divulge some of my trade secrets so here goes (purists beware):-

Plastic coated curtain wire being of similar diameter to an axle rod (approx. 4.1 mm) makes an excellent former for curved steam pipes where interlocking chimney adaptors are used for the curved sections. It can also be used for curved hand rails and indeed many other applications where flexibility is required. A coat of aluminium paint readily disguises the white plastic covering. The wire can be retained in position by collars or for that matter any bossed part using long grub screws. It is sufficiently stiff to be self supporting over short distances depending on the load but of course is not strong enough to transmit power. Most of my recent steam engine models have embodied plastic curtain wire somewhere in their construction (unobtrusively I hope).

1 1/8" Flanged Wheels - I selected six of my shabbiest examples of this part and carefully removed the bosses which I then re-peened on the reverse or the flanged side of the wheels. The advantage of this is that it reduces the overall width of the wheel by 1/4" making it most useful when constructing powered "0" gauge locomotives (fitting and tightening the grub screws is facilitated by using a very small magnetized screw driver). I used these "converted" flanged wheels on my two Hornby style locos which were running at the last Convention.

A macabre finale - According to an article in the LISTENER (27/11/93, p.53) the GALLOWS were referred to as the "Meccano Set".

All the best for the New Year and happy Meccanoing during 1994. I look forward to meeting some of you next Easter at Stratford.

David Wall

PARTS WANTED.

P/N 10 Fishplates 300-350 required.

P/N 11 1/2"x1/2" Double bracket 200 required.

Doug Harris, Box 68392 Newton, Auckland 1.

Tel. Bus. 09 522 1881 Res. 09 520 7817. Fax 09 520 5375

High-Ratio Epicyclic Reduction Gearing.

W.J.Watt Auckland.

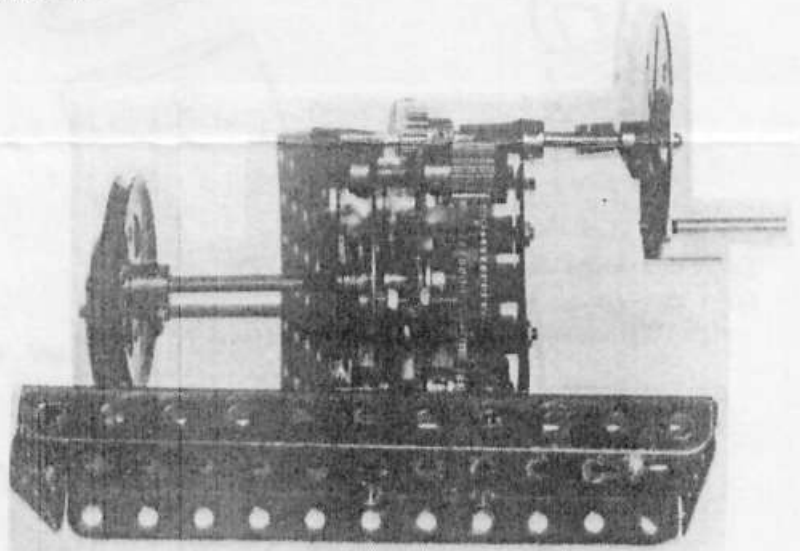
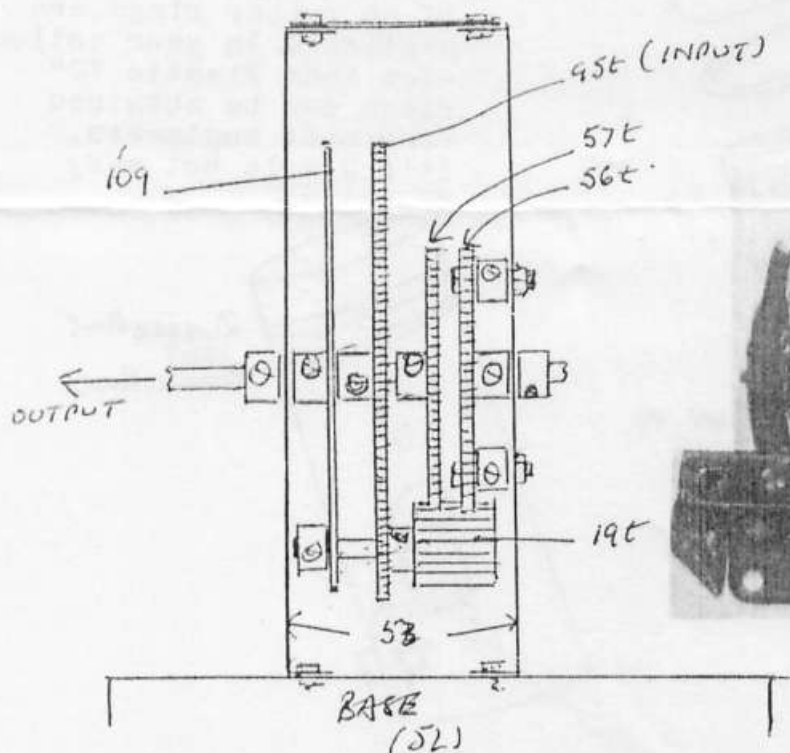
Several years ago, in a book called 'The how and why of mechanical movements' by H.Walton, I was intrigued by a planetary mechanism for a high ratio epicyclic reduction gearing, based on a pair of gear wheels with their tooth number differing by one, as the sun gears. The annulus was the input and its pinions engaged both sun gears. One of the sun gears was fixed to the frame and the other to the output shaft. I built up a model of this using a Meccano 57t gear wheel and an obsolete 56t gear wheel for the sun gears; the planet gears were wide faced 19t pinions; these journaled in the annulus which comprised a 95t Gear wheel bolted to but separated from a face plate, this being to improve the stability of the planets. The annulus was driven by a further 19t pinion on a separate input shaft. The reduction achieved was $1:57 \times 5 = 1:285$.

I never used this in a model, building it merely as an exercise in using my specimen of the 56t gear which has two holes making it easy to fix it to the frame. I found references to similar arrangements in Meccano as follows:

1. M.J.No3,p75, by B.Williams and P.Briggs.
2. Sheffield Meccano Guild Magazine No 18,p5, by J.Bader.
3. 'Everything Epicyclic', pp20-21 by R.Hogg.

I was therefore interested to see it further described by Alan Partridge in his article 'A Guide to Harmonic Drives' in C.Q.No 20, June 1993, where it is illustrated in figure 5 and described as 'Folded Paradox with Offset Drive'. Quite apart from this particular mechanism, his article is a 'must' for useful information on Harmonic Drives. What a pity Meccano doesn't have a flexible Gear ring! The question may be asked, why bother with such a method rather than just a worm/gear wheel combination? This latter with its skew drive may not always be suitable. The epicyclic arrangement does provide a use for both the obsolete Meccano gears: 20t and 56t, combined with 19t and 57t respectively.

The photo and sketch are of my arrangement for which I claim absolutely no originality.



THE USE OF LIGHT GUNS FOR MODEL ILLUMINATION.

The old Red and Green parts needed Permanently mounted Lamp Holders for model illumination.

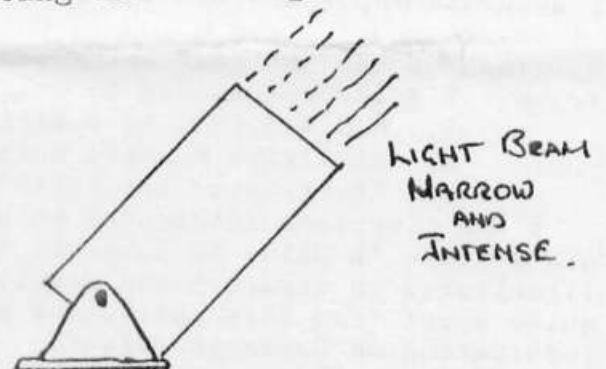
But the New Meccano France Bright Zinc parts have the ability to REFLECT light and open up a whole new area of colour possibilities. Multi coloured Ltght Guns bounce their light beams off the Bright Zinc strips giving amazing colour effects.

I made Gary Higgins Exhibition Model "Spheres Within Spheres" made certain modifications and fitted three light guns, Red, White, and Green, the end result has created a lot of interest.

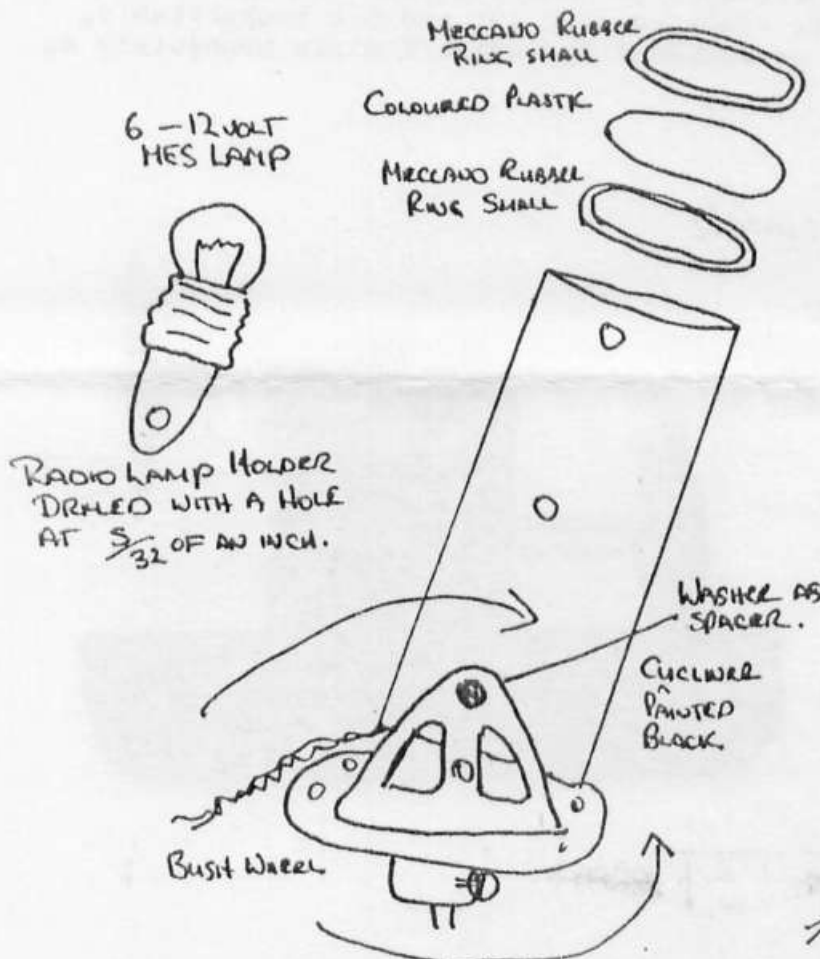
The field is wide open, both for stationary or moving models and the next model will have 6 Light Guns. White, Red, Green, Blue, Yellow and Purple. just think of the next stage, special glasses and Ultra - Violet Light Guns., there is no end to this new concept.

The Difference between General lighting and the Light Gun.

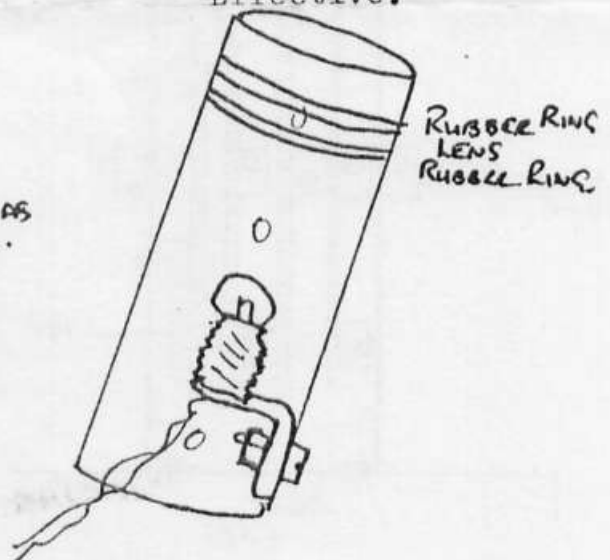
GENERAL LIGHTING.



How to make the Light Gun and how to Aim it in the right direction.



The Plastic Lens can be Made out of any Clear Coloured material. If no rubber rings are available in your collection then Plastic "O" rings can be obtained from most engineers. It's Simple but very Effective.



CHRISTMAS WREATH FORMULA

$$\frac{76 \times 90a (6 \times 23b) + 42 \times 37ab}{145}$$

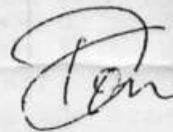
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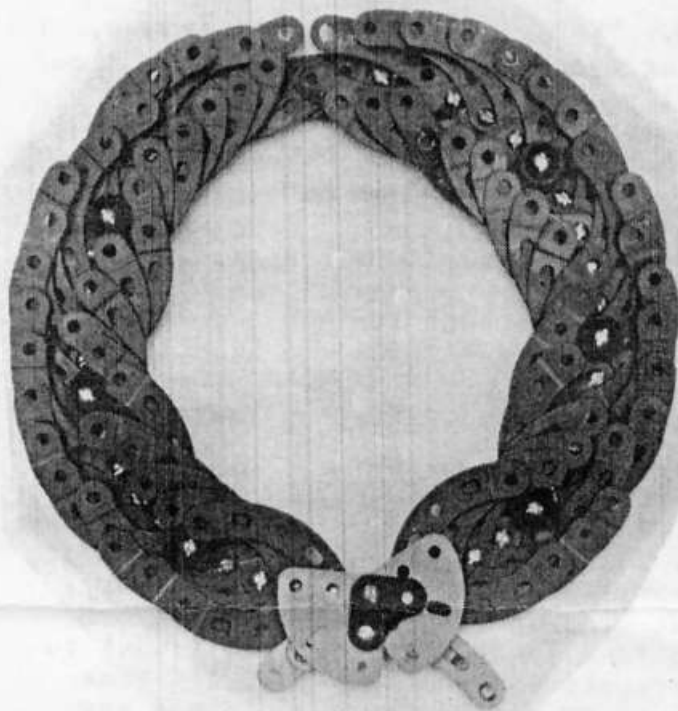
$$\left[\frac{133a}{2 \times 214a} \right]$$

$$\frac{2 \times 89a}{2 \times 89a}$$

Wishing you a Happy, Contented Box of
Meccanocal, Erectoral, Merkuric
Christmas and a Constructive New Year



Don Redmond
9 St. Catherine Street
Kingston ON K7K 3R9
Canada



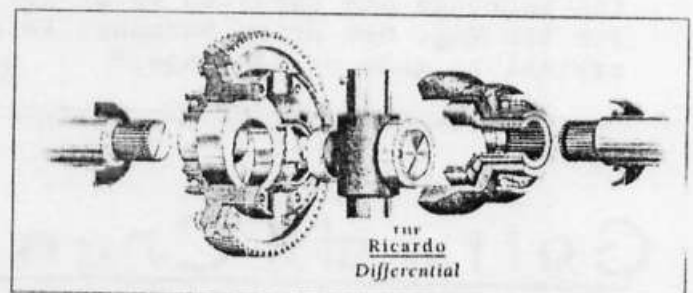
Brilliant 'gearless' differential

When John Moore of Ricardo suddenly conceived a totally new concept for a vehicle's differential system, after thinking for days about an idea suggested by his colleague Sir John Garden, he rushed out and bought sufficient Meccano components to build a working model.

It is particularly suitable for front-wheel-drive cars because it permits a torque bias ratio varying from 1.0 at low load (as always

the case with a conventional bevel gear differential) to as much as 5.0 under full tractive effort.

Furthermore, the system is compatible with both ABS and electronic traction control. The unit can also be employed in rear wheel drive cars or serve as the centre differential in four-wheel-drive systems.



Ricardo's differential has a variable torque bias ratio and low production costs.

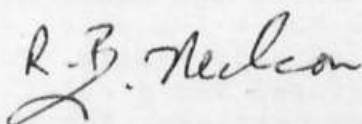
From Brian Buchanan, Auckland.

Meccano model building is still in recess as I have bought a 2 bedroom unit here in Palmerston North and am spending the holidays completely renovating and redecorating with a move in date penciled in for the beginning of February. Vol 2 of my Index also has to be finished by the end of February so am being kept out of mischief. Had a successful year here at Massey and managed to pass 10 papers. 1994 will be another full year's study but am still having fun.

Regards to all

R.BRUCE NEILSON

PO BOX 1009,
PALMERSTON NORTH
NEW ZEALAND
(06) 356 3804



WHAT OUR READERS SAY.

S.J.DUBOIS Ontario, Canada, 20/11/93. "Very pleased with all issues. It does keep me updated with what is going over there and it is always nice to see remembered names (also new ones) tips, articles, etc. Thanks to your suggestion I now have Vol 10 to present via Don-Redmond. Our Hobby Show was a success as yours was. Next show is here(Ottawa) then Redmond's (Kingston) There are others but too far(expensive) Please publish in two issues the following For Sale Advert.

1916-1981 Meccano Magazines. Complete. Plus MMQ;JME;ME. Regarded as a very good collection. Vol1, No 1 to 11 and No 13 are reproductions by A.Curtis; 12 is original. No 14 to 35 are photocopies except for nos 22, 25 and 35 originals. Please send \$2.00 Canadian or equivalent. IRCs are acceptable for details and printout.

Your ideas re '2001 and all that' are very good. ~~Keep up the good work~~"

ROBIN RYE, 18RD, Eltham, 3/1/94. "I thought it was time I again contributed to the Magazine. The enclosed advertisement is typical of what appears in the Taranaki Daily News from time to time, this one just before Christmas. I thought it might reproduce in the Mag. I haven't spoken to the proprietor but am sure he wouldn't mind. I think Daryl Anderson joined him up anyway. I'm sorry I haven't yet photographed that Tractor I showed you in July. I intend to produce full-photo and instructions for building it but I want to reserve that for the ISM model building competition that was promised some time ago. I've just sent my first order to MW models for some of the new parts and the large curved strips. Also a first order to Frizinghall Models for Exacto curved strips of non Meccano sizes, 6", 12", 14" radius. I like curves! I've received a complimentary copy of CQ from Robin Johnson (Editor) Truly a marvellous Magazine. I built Samson the Great. The article on the Illingworth Lancaster prompted me to send photos of my Spitfire model. I purchased the Doug Yule Meccano collection. Reorganising my storage, due to the increase has resulted in my not knowing where anything is. A suggestion for the Mag. Get Brian Buchanan to write an article on that marvellous Storage cabinet he made or had made." (The advert. is on page 16)

Gottwald Crane

Bob McCracken

(Continued from last issue)

D.C. POWER VIA TURNTABLE. The $4\frac{1}{2}$ " diameter space in the centre of the turntable can be used to construct multi-circuit rings to supply volts to the 3 motors and lights in the superstructure. To the centre hole of a $2\frac{1}{2} \times 2\frac{1}{2}$ insulated plate #511, bolt an insulating spacer #564, pointed upwards. Bolt a flange wheel #137 (flange up) in a central position around #564. At each corner of the insulated plate #511, and on top, place the slot hole of an a/bracket (other lug up), insert a bolt down into an insulated spacer #564. The assembly can now be bolted to the $4\frac{1}{2} \times 4\frac{1}{2}$ flat plate at the junction of the cross. Use narrow strips or alternatively cut a narrow strip of thin flat iron to make a ring with suitable holes to bolt onto the 4 a/brackets #12. This is the outside circuit, the wheel flange is the 2nd. For the third circuit use the disc of a bush wheel (boss removed). Trim the spacer in the centre of the assembly to fit into the centre hole of the bush wheel disc. Use a threaded pin through an insulated washer to bolt the disc to the centre insulated spacer #564. Drill a small hole through the disc and clear of the #564 to thread an insulated circuit to the central threaded pin which is the fourth circuit. The circuit to the slew motor underneath the model goes direct, while the four circuits for the superstructure enter the model via the base and are connected to the four rings in the turntable centre. Power between the four rings and the winch carriage is transferred via a rotor which is driven by a long bolt in the base of the winch carriage. The rotor is a $2\frac{1}{2} \times 2\frac{1}{2}$ insulated plate #511 with a $1\frac{1}{2}$ " wiper arm #532 on three

of the corners with insulated circuits attached that lead off to the appropriate points in the winch carriage. Adjust the wiper arms to rest on contact points then place the centre hole of the rotor on the central threaded pin of the turntable and secure with an aero collar #59a. Complete the fourth circuit, with a $1\frac{1}{2}$ " wiper arm fixed to an insulated spacer #564 bolted underneath the winch carriage.

The winch carriage can now be fitted to the threaded bosses on the $5\frac{1}{2}$ " curved strips of the turntable. Insert bolts through the bottom plate. For the front, seventh row from the front and second row in. For the back use the seventeenth hole from the front and one hole in from the side.

CONSTRUCTION OF THE TWO MASTS. Although they both have the same cross section measurements and similar lattice, the top and base parts are different, while the main mast is taller than the auxiliary mast. For the explanation each mast is divided into three sections, main mid, base and head. Main mast mid section has a length of two x $24\frac{1}{2}$ " a/g #7 plus one $12\frac{1}{2}$ " a/g #8 123 holes. Three a/gs for each corner. Select 2 even pairs. Each pair join at their slot holes with a $4\frac{1}{2}$ " strip #2a. Join the pairs at their round holes with a $5\frac{1}{2}$ " strip, to form a rectangle cross section to fit lengthwise across the winch carriage. Start at the base and at each numbered hole bolt $4\frac{1}{2}$ " or $5\frac{1}{2}$ " strips square onto a/gs. At hole 1 standard strips. At hole 12 and 22 use narrow strips. At holes 32 and 34 use standard strips. For holes 44, 54, 64 74, 76 and 99 use narrow strips. For holes 120 and 122 use standard strips. The mast now has two short sides, left and right, while the long sides become front and back. For diagonal bracing on the sides use $6\frac{1}{2}$ " narrow strips #235e. Bolt to the lower front at hole 3. Bolt the other end of this $6\frac{1}{2}$ " to hole 12 at the back, same hole 12 as for the $4\frac{1}{2}$ " strips square on. Next brace at hole 13 and 22, same assembly all the way up. For diagonal bracing on the sides of the two top spaces, brace in a spiral pattern using made up 14 hole narrow strips or 13 hole plus narrow fish plates. Start at hole 76, use holes 86, 96, 100, 110 and 120. For diagonal bracing on the front and back. Start at the right bottom hole 2 and fit $7\frac{1}{2}$ " narrow strips #235k (across to hole 12), all the way up to the long spaces. To match with the side diagonal bracing the narrow strips will vary from 14, 15 and 16 hole strips, made up lengths and narrow fish plates.

The bottom of the mast tapers to a base and fulcrum. For each side use a sector plate #54, flanges out, and bolt a $7\frac{1}{2}$ " a/g #8b by the round hole flange (out). Leave the two lower holes of the sector plate clear. Join the two sides with a flange plate bolted to the top of the sector plate. Fit a $4\frac{1}{2}$ " narrow strip across the space on each side. Across the three bottom holes of each sector plate bolt two 8 hole wheel discs #24a, the centre holes are the fulcrums for the mast. Use the two top holes of the $7\frac{1}{2}$ " a/gs to join onto the midsection of the mast. The top of the mast is extended by a further $12\frac{1}{2}$ " a/g and tapered inwards on the sides. Bolt the two top slot holes apart with a $3\frac{1}{2}$ " narrow strip #235b. Use the same bolt to extend each $12\frac{1}{2}$ " a/g by fishplate. Bolt a $3\frac{1}{2}$ " a/g #9b by the round holes (flange in) across the fish plates. Also include (vertically) a $5\frac{1}{2}$ x $2\frac{1}{2}$ " flat plate #70 beside the $3\frac{1}{2}$ " a/gs. Use the bottom holes of this plate #70 and mount it as far forward as possible. Bolt a $2\frac{1}{2}$ " strip to each $3\frac{1}{2}$ " a/g, across the front and back to secure and keep them apart. To each $2\frac{1}{2}$ " end of the flat plate #70 add a triangular plate #76. On top and between each end of the plate #70 add a $2\frac{1}{2}$ x $1\frac{1}{2}$ " flange plate #51. To complete the structure add a roof and a "MECCANO" name plate on the side.

THE AUXILIARY MAST has the same cross section measurements as the main mast. The length of the mid-section is one $24\frac{1}{2}$ " a/g #7 plus one $7\frac{1}{2}$ " a/g #8b. The construction is the same as far as and include hole 34. Higher up the mast, construct the bracing in a spiral pattern. On the sides use made up 7" narrow strips, and narrow fish-plates where necessary. On the front and back use $7\frac{1}{2}$ " narrow strips #235k. At hole 64 bolt standard $4\frac{1}{2}$ " and $5\frac{1}{2}$ " strips across the end holes of the girders. Also bolt fish-plates on hole 64, to extend the mast with a $5\frac{1}{2}$ " a/g #9. Add a $6\frac{1}{2}$ " a/g #8c for further extension. Join with fish-plates. Taper the mast and where the $5\frac{1}{2}$ " and $6\frac{1}{2}$ " girders join, fit narrow strips square across, $2\frac{1}{2}$ " on the sides and $3\frac{1}{2}$ " narrow strips

on the front and back. The $6\frac{1}{2}$ " a/gs extend parallel with each other. Across the top end of the $6\frac{1}{2}$ " girders bolt a $3\frac{1}{2}\times 2\frac{1}{2}$ " flange plate #53. Use $5\frac{1}{2}$ ", $4\frac{1}{2}$ " and $3\frac{1}{2}$ " narrow strips to complete the lattice work. Fit a $3\frac{1}{2}$ " flat girder #103d to the front and back at the top of the mast.

THE HEAD OF THE AUXILIARY MAST. Stand the two sector plates #54 on their wide ends, with flanges in. Bolt apart front and back with $2\frac{1}{2}\times 2\frac{1}{2}$ " flat plates #72. Use the lower portion. At the wide end and inside of each sector plate, bolt a $2\frac{1}{2}$ " a/g #9d (round holes to the centre). Bolt the assembly in a central position to the flange plate #53 on top of the aux. mast. Inside and at the top of each sector plate bolt a $1\frac{1}{4}$ " disc #217a. Onto the top back flange of each sector plate, bolt a bushwheel #24, to the top central holes of the back $2\frac{1}{2}\times 2\frac{1}{2}$ " flat plate #72. In the boss of the bushwheel secure a 1" rod #18b to protrude outwards. Use the corner hole of a $1\frac{1}{2}\times 1\frac{1}{2}$ " flat plate #74 to hang it on the 1" rod. Onto the holes each side of this corner, bolt a flanged quadrant #214b+c (flanges out). Take two of detail 2 and extend the apex with two narrow fishplates (side by side). Loose bolt and locknut the fishplates onto the bottom holes of the quadrants. This is the terminal for the cables to the ballast tray, detail 8. fit a 3" rod #16b through one of detail 3 (pulley sheaves) with a collar on each side, and journal the rod in the centre holes of the $1\frac{1}{4}$ " disc #217a. Secure with collars. Onto a $3\frac{1}{2}$ " rod #16 fit one of detail 1 with a collar each side. Journal the rod in the trunnions, on each end fit one of detail 2. Secure with collars. Line up detail 1 with the l/h pulley of detail 3 and fix collars in place. Cables from the rod and strip connector of detail 2, terminate with detail 2 at the rear of the boom. This is the track for the luff cable from the motor and gearbox (on the aux. mast) to the other associated pulley sheave detail 3a suspended between the two masts. Thread the cables around the pulley blocks and terminate on the cage in the head of the aux. mast.

CONSTRUCTION of the BASE of the AUXILIARY MAST is the same as for the main mast. Extend the top of each sector plate with a $3\frac{1}{2}\times 2\frac{1}{2}$ " flexible plate #190a, with a 3" a/g 39c fixed to the top edge. Join the two sides across the top with a $5\frac{1}{2}\times 2\frac{1}{2}$ " plus a $5\frac{1}{2}\times 1\frac{1}{2}$ " flexible plate, overlap one hole. Inside each sector plate (base) at holes 2 and 4 from the top, and on the back row, bolt a bushwheel. Leave a short rod in the boss. This is the fulcrum for the boom described in detail 7.

To the back and each side of the aux. mast, at hole 60 fix one of detail 1a. On each side of the mast at holes 76 and 78 bolt a double arm crank #62b. Fit a detail 1 into the boss of each crank.

The **TWO CABLES** for the **MAIN HOIST** come off the top front of the winch drum, up the back of the aux. mast, through the keepers on hole 60 and 77, then directly across to the top and back of the main mast, are threaded through the keepers (detail 1), before running over the outside pulleys of detail 3, and down to the main hoist block detail 5. Thread round and round and terminate on the cage at the top of the mast.

It is necessary to stabilise the crane to thread the cables in place. Use $24\frac{1}{2}$ " a/gs and rods to fit between the rear of the winch carriage and aux. mast, also between the aux. mast and main mast.

Detail 1 KEEPER PULLEY FOR HOIST CABLES. Between two narrow fishplates #237 bolt several washers and just allow free movement for a $\frac{1}{2}$ " pulley #23b between the fishplates and journaled on a rod through the round holes.

Detail 1a The above detail can be fixed to the superstructure when hinged on a narrow bracket #238a. Use a short rod and collars.

Detail 2 TERMINALS TO SECURE STAY CABLES. To each hole on the curved side of a corner bracket #133a bolt a rod and strip connector #212. Tie the cables to the rod portion of the #212. 10 are required.

Detail 3 CAGE FOR MULTI-SHEAVE PULLEY BLOCK. Place five 1" pulleys #22a on a rod with a $2\frac{1}{2}$ " perforated strip #5 on each side (centre hole) secure with collars. Use a $1\frac{1}{8}$ " bolt #111d through the end hole of the $2\frac{1}{2}$ " strips with washers to keep them apart, to create a close but free turning group of pulleys. 10 are required.

Detail 3a. Use detail 3 and thread the $1\frac{1}{8}$ " bolt through the middle hole of a

strip coupling #63b. Fit the centre hole of a curved strip #89a into the slot of #63b and bolt in place. Curve away from the strip/c. This assembly compliments the pulley block on the head of the aux. mast. Bolt a/brackets to the ends of the curved strip #89a, and, in turn bolt one of detail 2 to the a/brackets. The four cable stays can now be connected to the top and back of the main masr.

Detail 4 TOP OF MAIN MAST. Back. At the apex of the triangular plates #76 journal a $3\frac{1}{2}$ " rod #16. Between the plates fit two of detail 1 (for main hoist cables). Outside the triangular plates fit one of detail 2, To anchor four stay cables to detail 3a.

Detail 4a TOP OF MAIN MAST. Front. At the apex of the triangular plates journal a $3\frac{1}{2}$ " rod #16 to carry two of detail 3, secured at each end with a $\frac{3}{4}$ " washer #38d and a collar.

Detail 5 MAIN HOIST PULLEY BLOCK. With two $2\frac{1}{2} \times 2\frac{1}{2}$ flat plates #72 standing on edge, use four DABs #48 to bolt apart. Use the outside middle and top corner holes. Across the $1\frac{1}{2}$ DAB., on each side bolt a $2\frac{1}{2} \times 1\frac{1}{2}$ flat plate #74a (leave two spare holes at the top). Use a $2\frac{1}{2} \times 1\frac{1}{2}$ flexible plate #188 and a/bs to connect the two flat plates (underneath). A 3" rod #16b is journaled in the top centre holes of flat plates #74 to carry two of detail 3 with washers and collars to secure. The main hook is made from three $2\frac{1}{2}$ " curved strips #90 sandwiched about the slot of a strip coupling #63, connected by a short rod to a universal coupling #140, in turn connected by a short rod to a short coupling #63d. A 2" rod #17 fitted with washers and collars passes through the short coupling to hinge the hook to the main hoist pulley block.

Detail 6 MOTOR AND GEAR BOX FOR LUFFING. Bolt a $5\frac{1}{2} \times 2\frac{1}{2}$ flat plate #70 to the slot holes and within the flanges of two $5\frac{1}{2}$ " a/gs. At one end of the flat plate #70 bolt the short sides (flanges in) of two $3\frac{1}{2} \times 2\frac{1}{2}$ flange plate #53. Between the #53 and at the back bolt two $1\frac{1}{2}$ " DAB #48a, three holes up. One at the back the other in the centre hole of #53. The centre hole of the DAB journals a $2\frac{1}{2}$ " rod #16a which carries a worm 332 between the DABS. This worm drives a $\frac{1}{2}$ " pinion #26 on a $3\frac{1}{2}$ " rod #16 journaled in the centre holes fourth hole up. A 25^c pinion #25 on the end of this rod drives a 50^c gear #27 on a further $3\frac{1}{2}$ " rod journaled in the centre holes sixth row up. A winch drum constructed from a sleeve piece #163, fixed inside two $\frac{3}{4}$ " flange wheel #20b is secured to this rod. A PDU. motor 60:1 joined to the gearbox by a plastic rod connector #213p drives the luff winch. It is mounted on the $5\frac{1}{2} \times 2\frac{1}{2}$ base plate and positioned in the centre of the aux. mast. To secure the luff gear box and motor to the back of the aux. mast. At hole 12 fit a $3\frac{1}{2}$ " a/g #9b by the slot holes to the existing cross member. Other flange on top and inwards. At hole 19 bolt a $5\frac{1}{2}$ " a/g #9 by the slot holes across the mast. Other flange on top and back. Use this a/g to bolt to the top of the luff gear box. the cable for the luff action goes from the winch, up the back of the mast, through the keeper (detail 1) in the head of the aux. mast, over the first pulley, onto and around the pulley detail 3a suspended between the two mast, then back and around the pulley in the head of the aux. mast etc. and finally terminate at the mast head on the #5.

Detail 7 THE AUXILIARY WINCH, in the rear of the winch carriage controls the aux.mast. Extra power is achieved with the use of the boom that has a fulcrum in the base of the aux. mast. Each side of the boom is constructed with a $12\frac{1}{2} \times 1\frac{1}{2}$ flat plate #74g bolted onto two $12\frac{1}{2}$ " a/gs #8 and joined at one end (rear) by two $4\frac{1}{2}$ " a/gs #9a. Cover these a/gs with two $2\frac{1}{2} \times 1\frac{1}{2}$ flexible plates #188. At hole 6 (from fulcrum end) bolt a further $4\frac{1}{2}$ " a/g with two corner brackets to reinforce the assembly. Extend the boom towards the aux. mast. On each side add two $5\frac{1}{2}$ " strips, top and bottom to the end of plates #74g. Taper the $5\frac{1}{2}$ " strips on each side together and use the common hole thus formed as the fulcrum. Refer construction aux. mast. On the top and outer end of the boom bolt a trunnion (flanges out). A 5" rod #15 is journaled in the trunnions which carries from the centre out, a $2\frac{1}{2}$ " narrow #235 (to tie down to the bottom of the boom), a collar, coupling, two washers, detail 3, trunnion, collar, chimney adapter #164 and aero collar #59a.

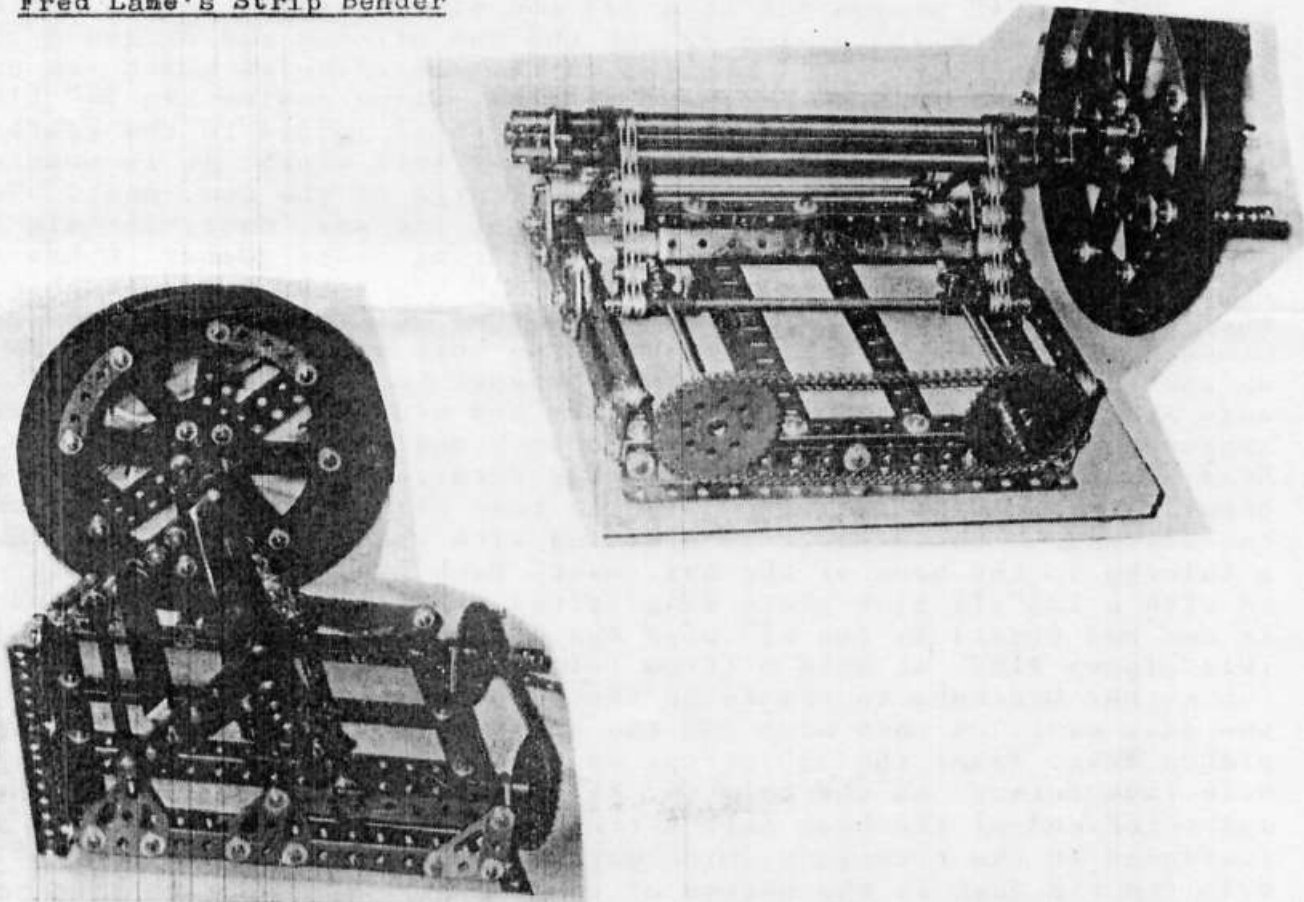
A $1\frac{1}{2}$ " rod #18a is secured to the longitudinal bore of each coupling. Use the longitudinal holes of a short coupling #63d and secure to the other end of the $1\frac{1}{2}$ " rods. Fit a 3" rod #16b centrally through the transverse bore of the short coupling #63d. Fit a detail 2 on each end of this rod and secure with with collars. Tie a cable to each rod and strip connector #212a (four required). Terminate the other end of each cable to the appropriate plate #212a journaled in the trunnions at the rear of the aux. mast.

The above assembly of pulleys is complimented with the assembly mounted in the trunnions at the top rear of the winch carriage. Use a $6\frac{1}{2}$ " rod #14, From the centre out place a collar (each side of the centre), trunnion, add detail 3, collar, trunnion, collar, chimney adapter #164 and a aero collar #59a. Line up the top and bottom pulley sheaves. Thread the two cables from the top front of the winch, to and over the sheave, down and around the bottom sheave etc. to terminate on the $2\frac{1}{2}$ " strip of the top pulley cage.

Detail 8 BALLAST TRAY. Bolt the end holes of two $5\frac{1}{2} \times 3\frac{1}{2}$ flat plates #52a each to the end slot holes of two $9\frac{1}{2}$ " a/gs #8a. Raise the sides at each end with corner gussets #108. On each side bolt a $9\frac{1}{2}$ " a/g between the corner gussets, (slot hole flanges in). On the second hole in from each corner bolt a rod and strip connector, to join cables to detail 2 hung from the quadrants in the head of the aux. mast. Adjust so that the tray just clears the surface. Add or withdraw weights to balance the load on the main hoist.

CONTROL OF THR FOUR MOTORS. 6 to 12 volts D.C supplied in parallel via a voltage controller to the PDU motors will give smooth running. Refer N.Z.F.M.M. magazine Feb. 93, pages 5 to7 for voltage controllers by Kerry Stevens. Independent DTDP switchs to each motor will give stop, forward and reverse. Lights can add interest to the model. Run a circuit of lights in series A.C.or D.C. The voltage will depend on the number of lights used. "HAPPY CRANING."

Fred Lane's Strip Bender



Getting the Right Curve.

At an Auckland Meccano club meeting some time ago two different strip rolling devices were presented. It was agreed that these are about the most useful gadgets one may possess as many models require evenly curved strips or plates, which is difficult to obtain manually. Both the above were closely based on a device described previously in NZFMM Mag vol 6 no 5, June 1981 and devised by Simon Moody. I was asked to reproduce it and here it is as a drawing showing the essentials. In this, the rollers are steel, which is better than using Meccano couplings. Simon made these for sale and may still have them available. Originally they were in two sizes, 2 3/4" or 3 3/4". The examples at our meeting were suitably mounted on bases for stability and below is a photo of my example of it.

No doubt, many people have fashioned their own devices and I have been able to find the following in my Meccano material:

1. MM March 1969. 'Spanner' featured a machine by V. Bachelard of Zurich, designated for plate bending and using Meccano wood rollers covered with sand paper.

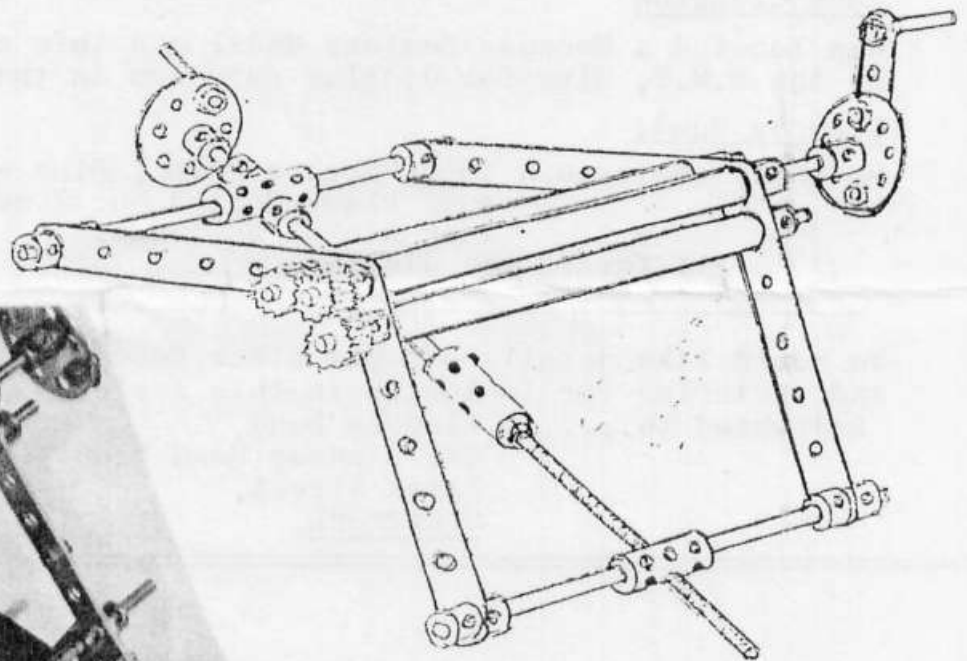
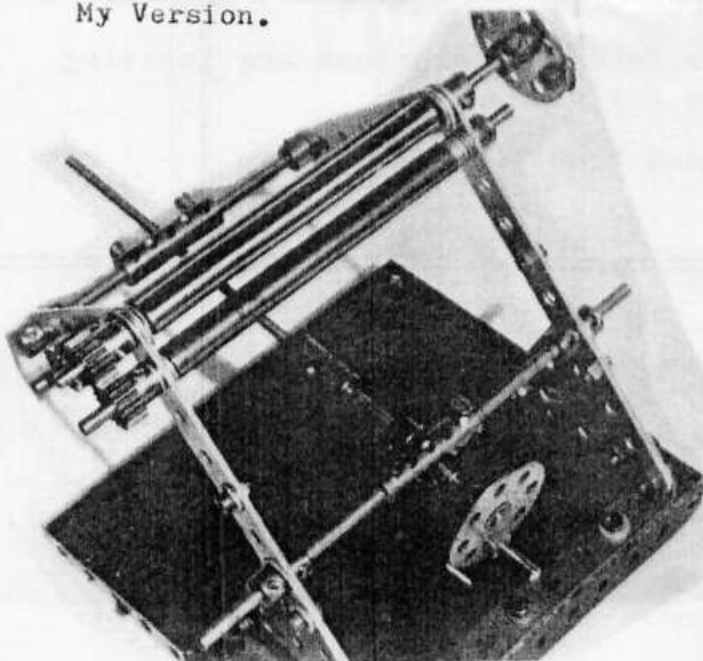
2. MM Jan. 1978. Two different strip rolling machines were shown. The first, by Meccanoman Geoff Wright, used short couplings for the rollers, the frame consisting of rods fixed in couplings. The second, by Alan Partridge, had 5 1/2" strips for the frame, and in a letter in MM of April 1978, he explained that his rollers were the bosses from old style Meccano road wheels.

3. MMGG No 12, Sept. 1987. Bert Halliday had a long, very informative article on a rolling machine that would cope with rack strips which are thicker than standard strips.

George Ovenden, has kindly supplied two pictures of a very rugged type built by Fred Lane of Victoria, Australia. This model is made to handle plates up to 5 1/2" wide, and could be most useful.

With such a gadget, even curves are easily created, and when finished with, the plate or strip can be properly straightened again, which is otherwise quite difficult to carry out satisfactorily.

My Version.



Simon's Strip Bender

COLLECTORS' CORNER.

One of the beauties of Meccano, is, the various fields that members can work in.

The Field of Meccano History provides the knowledge that Meccano Historians always look forward to at any time, whether it be an Old Manual, Part, or set, no item is too small.

Don Blakeborough.

Recently purchased at auction in Wanganui a Meccano Collection which contained almost all the parts to make up an early Meccano Electrical Outfit No. 1.. A very rare find.

Daryl Anderson.

A 1935 Mint 000 (the smallest set of the period) with Cardboard parts, Instruction Books and Sheets, Box in very good condition. The pulleys belonged to the Blue era which makes it quite rare.

Robyn Rye.

Rumour has been confirmed that Robyn has purchased Doug. Yules Meccano collection, almost a NO.10 plus. Most of the parts come from the Red - Green 1950 era and should prove a welcome addition.

Bruce Geange.

Bruce as ever has been busy making gears for a 1929 Meccano Steam Engine, also finding time to restore Hornby Clockwork Trains etc. He has also been a keen Ambassador of Frank Hornby's to New Plymouth and Tauramanui and elsewhere.

Jock Clouston

Has located a Meccano Dealers Model and this could well be purchased by the W.M.T. Club for display purposes in the future.

Lindsay Bond.

Recently restored a 1938 Meccano No.6 , Blue - Gold set.
1952 Black Period No. 2 set.
1919 Nickel No.1 set.

All for future display.

We would like details of what other Meccano Historians are locating and restoring for inclusion in this series.

Addressed to.....Lindsay Bond,
C/- Lindsay Bond Electronics
Regan Street,
STRATFORD.

FROM THE BOOK: 'SKORPION'S DEATH' by DAVID BRIERLY

"It was one of those aerial Gunships the Soviets fielded in Afghanistan and now supply to anyone who thumbs his nose at Uncle Sam. There was paint slapped on the side to cover the markings. They're ugly brutes that look welded out of Meccano". WHOEVER HEARD OF WELDED MECCANO?

DURING DECEMBER I had noticed there were very few MECCANO sets for sale in the usual retail outlets around Auckland. The 500 Series and the Dynamic Series, in particular, were conspicuous by their almost complete absence.

SO I wrote to the New Zealand Distributors, F.W. Cave (Toys) Ltd. Their Chairman, Mr. Frank Pearce, kindly replied promptly and his letter is printed hereunder.

I am sure our MECCANO enthusiasts will sympathise and hope he has better luck next December.

Lloyd Spackman

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11 January 1994

The Auckland Meccano Club
1/344 Lake Road
T. KAPUNA

Attention: Mr Lloyd Spackman.

Dear Lloyd,

Thank you for your letter re your inability to purchase Meccano Dynamic series in local retail shops.

Yes I have to agree that our distribution was not good, owing to matters beyond our control.

The arrival of our shipment was later than our quoted delivery to our retail outlets, and this caused us no end of problems.

We had sold sufficient product to give us a good pattern of outlets, and would have been satisfied if our retail outlets had accepted these orders and displayed the goods for the Christmas trading period.

However this was not to be and a major proportion of the shipment was returned to us, after we had dispatched the goods.

The reasons we were given were that the goods were late and stores had spent their budget elsewhere. whilst waiting for stock to arrive. .

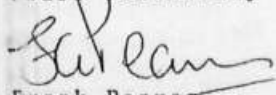
In December we had committed to a major advertising campaign and had to go ahead as it was past our deadline for cancellation.

I do hope that this gives you a little insight into the problems of distribution.

By all means publish this letter if you wish as it is an honest appraisal of what happened.

Please contact me personally for your requirements.

Yours Faithfully


Frank Pearce
CHAIRMAN

USEFUL HINTS

by Lindsay Bond.

For those who have recently purchased the New French Bright Zinc parts have noticed how quickly they lose their brightness. The answer to the problem once and for all. Buy a can of C.R.C. "PLASTICOTE 70" clear plastic coating, this gives a thin clear film of protective film. For restoring the gloss to Tin Plate products, I have used this product with amazing success. Will hold rust and stop its progress. Can also be sprayed on paper and cardboard to give strength and a waterproof gloss to a label etc. Obtainable from any good Hardware Shop.

USEFUL HINTS.

by Lindsay Bond.

Restoration of Cardboard Boxes, Meccano set Cartons Etc. Paper and Cloth.

Use P.V.A. Glue. This is WHITE to begin with but sets leaving a CLEAR finish, gives great strength to all corners etc., the thinner the better the glue penetrates.

Beware of using it on any metal surface as can be very corrosive.

See Robin Rye's letter on page 8.

Life used to be so much fun...



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